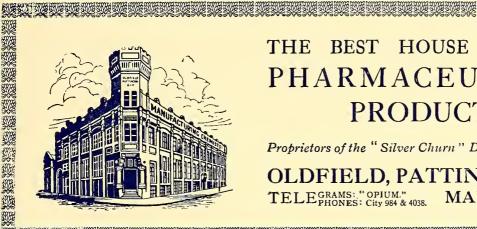


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No. 2294.

JANUARY 12, 1924.

Vol. C.



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LABORATORY FRAISSE, LIMITED, Registered Offices, 15 Great St. Andrew Street, London, W.C.2, have been appointed the SOLE REPRESENTATIVES for GREAT BRITAIN and FREE STATE OF IRELAND of LABORATOIRES FRAISSE (8 Rue Jasmin, Paris) for the importation and sale of FRAISSE'S FERRUGINOUS AMPOULES and DROPS, FRAISSE'S NEVROSTHENIC AMPOULES and DROPS, FRAISSE'S HYPOTENSIVE AMPOULES and DROPS, FRAISSE'S IODO-BISMUTHATE OF QUININE, and other preparations and products of LABORATOIRES FRAISSE, PARIS, for GREAT BRITAIN and FREE STATE OF IRELAND.

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OTICE IS HEREBY GIVEN TO THE TRADE that legal proceedings will be taken against all Firms importing or dealing in FRAISSE'S FERRUGINOUS AMPOULES and DROPS, FRAISSE'S NEVROSTHENIC AMPOULES and DROPS, FRAISSE'S HYPOTENSIVE AMPOULES and DROPS, FRAISSE'S IODO - BISMUTHATE OF QUININE, and other preparations and products of LABORATOIRES FRAISSE, PARIS, other than that obtained through the authorised source.

LABORATORY FRAISSE, LIMITED, further give notice that Messrs. WILCOX, JOZEAU & CO., of 15 Great St. Andrew Street, W.C.2, are their Sole Distributors of FRAISSE'S FERRUGINOUS AMPOULES and DROPS, FRAISSE'S NEVROSTHENIC AMPOULES and DROPS, FRAISSE'S HYPOTENSIVE AMPOULES and DROPS, FRAISSE'S IODO-BISMUTHATE OF QUININE, and other preparations and products of LABORATOIRES FRAISSE, PARIS, for GREAT BRITAIN and FREE STATE of IRELAND, and the only authorised source through which they may be obtained by the Wholesale and Retail Trade.

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The foregoing offer is made by LABORATORY FRAISSE, LIMITED, in an honest endeavour to allow the TRADE holding illicit stocks of FRAISSE'S FERRUGINOUS AMPOULES and DROPS, FRAISSE'S NEVROSTHENIC AMPOULES and DROPS, FRAISSE'S HYPOTENSIVE AMPOULES and DROPS, FRAISSE'S IODO-BISMUTHATE OF QUININE, and other preparations and products of LABORATOIRES FRAISSE, PARIS, to relieve themselves of these, and any Firms, Companies or persons who refuse to avail themselves of this offer will render themselves liable to legal proceedings without further

LABORATORY FRAISSE, LIMITED, request all Firms holding stocks of FRAISSE'S FERRUGINOUS AMPOULES and DROPS, FRAISSE'S NEVROSTHENIC AMPOULES and DROPS, FRAISSE'S HYPOTENSIVE AMPOULES and DROPS, FRAISSE'S IODOBISMUTHATE OF QUININE, and other preparations and products of LABORATOIRES FRAISSE, PARIS, to communicate immediately with Messrs. Wilcox, Jozeau & Co., stating the amount of the stock they have on hand for exchange in order that they may avail themselves if necessary of this FINAL. OFFER.

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15 GREAT ST. ANDREW STREET, LONDON, W.C.2.

January 9th, 1924.



THE

Retail Pharmacists' Union

AND

The Chemists' Defence Association, Ltd.

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- DEFENCE
- ADVICE

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Secretary, Retail Pharmacists' Union,

19 Tavistock Square, W.C.1

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BABIES LOVE IT!

Cow & Gate HouseGUILDFORD, SURREY...

P. A. T. A. LARGE SALE PLUS BIG PROFITS 25% to PROFIT 331/3% PROFIT

Made by Sellers of

Cow&Gate Milk Food

EXTENSIVELY ADVERTISED.
INCREASING

Genatosan's NEW Preparation. The Companion of Formamint

Nasmint Brand of GERM-KILLING SNJFF

Prevents and Cures Cold in the Head

Just as Formamint kills the germs in the throat and mouth, Nasmint kills them in the nasal passages. It is a fine powder administered by inhalation into each nostril alternately at the first symptom of an impending cold.

Your customers will be interested in Nasmint, because everyone has a cold now and then. The selling price to the public is 2/6 per packet. Buying price from wholesaler 23/- per dozen. It is on the P.A.T.A. list.

If Nasmint is ordered from us direct as part of a \$5 mixed order, the price is 23/- per dozen less 10%, cash with order, carriage paid.

GENATOSAN LTD., LOUGHBOROUGH, LEICESTERSHIRE

Trade Report — Tablets.

Please note the following alterations in prices:

Per Doz. Bots. Per 25's. 50's. 100's. 1000 AMMONIATED QUININE, 1/2 DRM. WHITE OR 4/6
RED. S.C. OR C.C. 5/9 7/- 11/-6/6 5/9 9/- 15/6 10/-6/- 9/6 4/-4/9 ASPIRIN, 5 GR. CASCARA SAGRADA EXT., 2 GR. s.C. or C.c. 3/6 5/- 7/9 3/6 9/- 15/-5/6 PHENACETIN, 5 GR. 9/6 PHENACETIN, 4GR. CAFFEINE CIT. 1GR. 5/9 9/6 16/- 10/6 4/9 7/3 12/- 7/-VEGETABLE LAXATIVE, s.c.

H, & T. KIRBY & Co., Ltd.,

3d. per dozen less on gross quantities.

Newman House, Willesden Green, London, N.W. 2.

Rheumatism, Neuralgia, Colds, Coughs, Sore Throats, 'Flu



A pretty comprehensive list covering the winter ailments of most people in your district.

They are all your potential Musterole customers. The point is, how to make them actual purchasers in the shortest possible time.

Use showcards, regularly displayed. Attractive and informative Musterole showcards; inviting, suggesting, advising a purchase Frequently securing it.

Musterole showcards are free to every chemist. Are they in your window? If not please request a supply—sent free.

> THOS. CHRISTY & CO. 4-12 Old Swan Lane, London, E.C.4

MUSTEROLE

"SAUROLO"

ICHTHYOL SUBSTITUTE

(Ammon: sulpho ichthyolicum)

also

RAW SAUROLO

for veterinary use

Manufactured by

S. A. Miniere Scisti Bituminosi
Di Meride E. Besano,
Meride (Suisse).

66 RHODIA 78 rand

ANTI-PYRETICS
GUAIACOL PRODUCTS
PHOTOGRAPHIC
CHEMICALS

SALICYLATES VANILLIN

and other fine chemicals.

Manufactured by

SOCIÉTÉ CHIMIQUE DES USINES DU RHÔNE, PARIS.

QUININE and SALTS

QUININE DICARBONATE
QUININE ETHYLCARBONATE
CINCHONIDINE
CINCHONINE
QUINIDINE
AND SALTS

Manufactured by the

QUINOIDINE

BANDOENGSCHE KININEFABRIEK AMSTERDAMSCHE CHININEFABRIEK NEDERLANDSCHE KININEFABRIEK

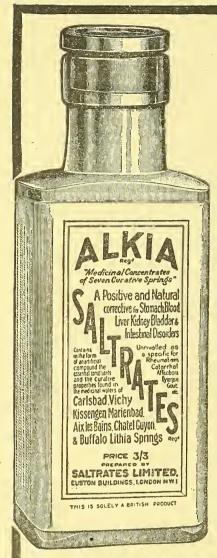
Apply to

Tel. No. City 6550 (8lines) R.W. Greeff & Co. Ltd.
THAMES HOUSE. QUEEN STREET PLACE, LONDON, E.C.4.

Tel. Add, "Greeff Cannon, London,"

Branch Office

PALATINE BANK BUILDINGS, 10, NORFOLK ST MANCHESTER.
Tel. No. City 5706/7. Tel. Add. Greeff, Manchester.



ALKIA SALTRATES

The best specific for LIVER, KIDNEY and RHEUMATIC DISORDERS, GOUT, Etc. Pleasant tasting and always pleases the user.

A widely advertised line which you can recommend with absolute confidence.

Sells at 3/3 a bottle (P.A.T.A.).

You can stock these goods on Guaranteed Sale Terms.
Carriage paid in United Kingdom on orders for 3 dozen, which

may be assorted.

REUDEL BATH SALTRATES

The best selling and most fragrant, refreshing, beneficial and all-round satisfactory preparation for the bath. Always extensively advertised.

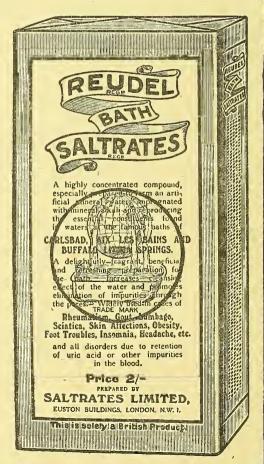
Sells at 2/- and 3/3 (P.A.T.A.)

KAL-SEL

The Super Saline.

Tonic laxative, alterative and thorough internal cleansing agent. Tasteless, effervescent. Always fresh.

Sells at 1/11 a bottle (P.A.T.A.)



Maws



Page

New Home Office Factory Regulations. More Business For the Pharmacist

Under the new Home Office Factory Regulations there are now altogether about 150,000 factories in the country which will be obliged to be fitted with specially prepared First Aid Boxes. This obviously means that there will be a big simultaneous demand for first aid boxes in all districts where there are factories. Also there will be a regular replenishment of dressings and other contents from time to time.

To every pharmacist there is a splendid opportunity to secure valuable business Now.

Particulars and prices of our series of boxes conforming to the new specifications which will enable you to capitalize this opportunity may be had on application. Also leaflets for distribution to your customers, with illustrations and blank spaces for the insertion of prices.

Telephone: City. 7 Private Branch Exchange Telegrams: Eleven Cent London

S. Maw, Son & Sons, Ltd.,

Aldersgate St., London,

and Barnet.

Cables: Eleven London Code:-A.B.C. 4h & 5h Edition



WRITE TO BATTLES

FOR

Standard

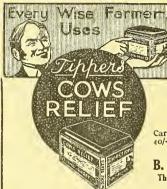
DISINFECTANTS for all purposes.

Carbolic, Pine and High-Coefficient Fluids. Superior Grade LYSOL in attractive cartons.

DOG SOAP, POULTRY & PIG POWDERS, etc.

High-class attractive decorated tins and cartons. "Agent's own name."

BATTLE, HAYWARD & BOWER (formerly BATTLE, Wictoria Chemical Works, Lincoln



RETAIL PRICES.

2/9, 6/-, 14/-, and 21/- per tin.

Invoiced to the Trade at

2/6, 5/6, 13/6, and 20/- respectively, and subject to 20% discount.

Carriage paid on orders of 40/- net. Postage charged on small lots.

B. C. TIPPER & SON,
The Veterinary Chemical Works,
BIRMINGHAM



THIS FLUID WILL DESTROY
ALL INSECTS such as FLIES,
MOSQUITOES, WASPS, BEETLES,
ANTS, COCKROACHES,
CRICKETS, etc., etc.

INSECT DESTROYING FLUID

The Bites Remedy will stop immediately all irritation, itching and swelling after insect bite.

Sold in Glass-stoppered Tubes in Boxwood Cases. Booklet on application, HERTZ & CO., 9 Mincing Lane, LONDON, E.C. (IDOF)



STEADY SALE

ALL THE YEAR ROUND

Messrs. Stearn Bros., Chemists, Stowmarket, write: "December 18th, 1923. Your 'Rodine' has a steady sale with us all the year round."

Messrs. Taylor, Brawn & Flood, Ltd., Chemists, Bedford, write: "December 22nd, 1923. The 'Rodine' Window Display was effective and gave your product a good impetus here. Your 'Rodine' is now selling quite well, and the margin you allow invites us to give it preference."

"RODINE" MARGIN and "RODINE" PREFERENCE

Besides excellent profit "Rodine" ensures satisfied customers. This is a valuable asset in selling this profitable side-line. Get busy now and make sure of securing a good sale all the year round.

Attractive advertising matter sent free on request to the Sole Maker

HARLEY, Manufacturing PERTH, Scotland



Why not Wobtain at Once List of Remedies Offers and Free Sales Helps from Spratts Patent It. 24/5, Fenchurch St.

London, E.C.3

One man in four is a prospective customer if you stock Spratt's Dog Remedies.

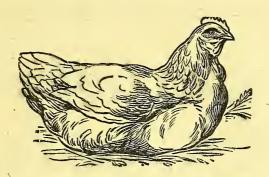
owns a Dog

Ine man in four

Do not let good business pass you by!

The dog requires appropriate medicines just as you do, or any of your customers—see that he gets it through you.

SPRATT'S DOG REMEDIES DOG AND SOAPS



EGG PRESERVING

PREPARE FOR SEASON'S DEMAND!

WE pack only the finest quality Waterglass, and give best value and service.

We shall be obliged if YOU will write early so that we can arrange for special advertising, etc., and to any chemist we have not yet supplied we shall be pleased to send full particulars.

OUR packing is not the "cheap-looking kind," it is equal to anything offered. The tins are strong and do not leak. We were the first to pack Waterglass for the Chemist's trade, and by sending out only the best have maintained our position as the

LARGEST PACKERS of THIS LINE.

ONLY ADDRESS:

TOMLINSON & HAYWARD, LTD. LINCOLN.

Proprietors of TOMLINSON'S DAIRY HELPS; LUDDINGTON'S OILS and VETERINARY PREPARATIONS; HAYWARD'S PAINT STICKS for branding Sheep, &c.

Tell your Astomer-Clean Milk is now Cheaper

THE CLEAN MILK

is now reduced from 3/6 to **2/9** 1-lb. size , , , , , 1/9½ ,, **1/5**½-lb. ,,



THE CLEAN MILK

A MOST PROFITABLE LINE FOR YOU TO HANDLE.

Milkal Nursery Milk, full cream DRIED Milk is baby's best food-from birth, and for mothers and invalids. You can recommend Milkal with every confidence for every milk purpose, and you will find it a most profitable line to handle.

Stocks should be returned to J. Lyons & Co., Ltd., Cadby Hall, London, W., in order that uew stocks may be sent, and the necessary cash adjustment made.

Write for Trade Terms to the Sole Distributors:

J. LYONS & CO., LTD.

Cadby Hall, LONDON, W.

Produced and packed in Devon (England) by MILKAL, Ltd., London and Devonshire.

Stocks are held at the following depots of Messrs, J. Lyons & Co., Ltd., where you can obtain one or more tins at lowest trade terms:

James Watt St., BIRMINGHAM 28 Aire Street - - LEEDS West End Chambers, Commercial Road - - SOUTHAMPTON 54 Brick Street - LIVERPOOL
Lovaine Crescent,
NEWCASTLE-ON-TYNE
219 West George Street, GLASGOW

96 North Western Street, Ardwick, MANCHESTER 4 Redcross Street - BRISTOL 68 Millicent Street - CARDIFF

An accident ward in the Home

We direct special attention to the fine show material available. The display at head is an actual photograph (reduced to 3th) of a cut-out facsimile of the packing. Window posters and counter cards in several styles.



Our Sales of Antiseptic Healing Ointment are phenomenal—

every customer of yours is a potential user—every actual user is a permanent friend. It is the finest healing ointment in the Craft; built up on a lanoline base it remains permanently sweet, smooth, and is unaffected by climatic conditions.

ANTISEPTIC HEALING OINTMENT



DECORATED TINS (Red and White).

Small .. per dozen, 2/- per gross, 22/6 Large .. ,, 3/9 ,, 42/-In counter display outers of 6 dozen small or 3 dozen large.

Special Rates for Large Buyers.

"B" STYLE. 2 oz. S/C jars, attractively cartoned, with own name on 3 dozen, as illustrated.

SPECIAL PACKINGS FOR EXPORT.

AYRTON, SAUNDERS & CO., LTD.

34 Hanover Street

LIVERPOOL



The More HOOKER'S You Sell

the more will you earn the gratitude as well as the assured support of your customers.

Apart from its delicious flavour, which commends it to all as a beverage, HOOKER'S is unusually beneficial as a food. People who suffer from nerves, insomnia, indigestion, anæmia, debility, and lack of appetite cannot fail to profit by taking it regularly.

For infants and growing children HOOKER'S is ideal because it combines the highest nutritive value with digestibility.

The scope for the sale of HOOKER'S is very great; the profit on it makes it well worth handling. A little enterprise will make it one of your very best lines, for you can win regular customers for it.

A stock prominently displayed is the first step.

If you have none, may we urge you to send us an early trial order.

HOOKER'S Malted Milk

Write for price and trade terms
Thew, HOOKER & Gilbey, Ltd., BUCKINGHAM





ALL-SOLUBLE

GOLD SEAL SUPER FLAVOURINGS

> GINGER JAMAICA GINGER WINE DRY GINGER ALE,

"Kenilworth"
GINGER ALE, "Belfast"
LEMONS GREEN
LEMONS TRIPLE
LIME JUICE & SODA
ORANGE SWEET
ORANGE BITTER
BLACK CURRANT
PORT FLAVOUR
CAPSICUM

AND OTHERS

also CLOUDY STONE GINGER BEER

None equal for Flavour, Solubility, and Concentration

Below Present Current Trade Rates

WRITE FOR SAMPLES AND PRICES

Clayton & Jowett

LIMITED

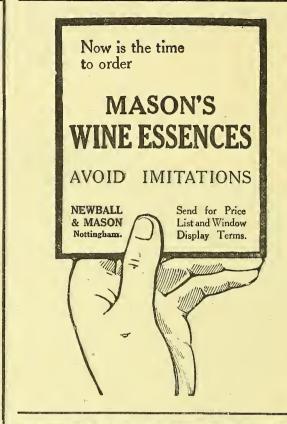
Essence Distillers, Food Colour Specialists

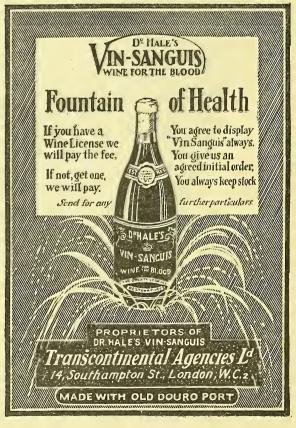
LIVERPOOL

Managing Director: J. W. CLAYTON, Ph.C., F.C.S.

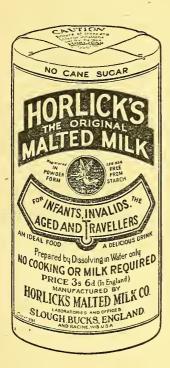
ESTABLISHED 1845

Look out for our Coloured Inset in the "Chemist & Druggist" Diary





Why it pays to push an Original



THE RIGHT **PACKAGE**

An original product is always preferred by the people who matter-they trust a name which is a household word and instinctively resent the mention of an imitation or substitute.

There's nothing "just as good" as Horlick's -the original Malted Milk.

Customers value and appreciate sound advice -that expert knowledge which is the result of long experience.

In recommending Horlick's your advice is as good as the product.

Gratified as the result of your recommendations, satisfied customers are your best assets —they gain confidence in you and come back.

Horlick's always satisfies.

The sale of Horlick's the Original is and always has been directed through Chemists, whilst substitutes and imitations are often exploited through other trades.

Attractive advertising material for Window Display and Counter Distribution free and carriage paid on application to the Company.



Horlick's Malted Milk Co., Slough, Bucks.

QUALITY MAKERS of

Malt Ext. and

All packings. Maltings – Apollo Works, Offices & Warehouse – Commercial Mills, Blackburn.

Established 1886. BELFAST—31 Antrim Road.

LIGHT BROWN

IN IMPERIAL HALF-PINTS, 4/-

ANSAR. HARFORD & CO., LTD. 182 Gray's Inn Road - - LONDON SOLE CONSIGNEES.

FOR ALL AGES AND CONDITIONS OF HEALTH AT FIRM AND PROTECTED PRICES.

Food for Babies, Prepared Barley, N. F. Cocoa, Biscuits, Wholemeal, &c.

See Trade Mark "T. R. Allinson" on all our goods-None Genuine Without.

SPECIAL NOTICE.

We issue a list of WHOLESALE HOUSES who keep above in stock, if for any reason you have difficulty in obtaining supplies, please send postcard direct to us, and a list will be sent to you by return.

NATURAL FOOD COMPANY, Ltd., Cambridge Road, Bethnal Green, LONDON, E.

All advertising matter—Booklets, Window Displays. Showcards, etc., free on application.

N.B —Our goods are to be sold only at prices stated upon the Price List we issue to the trade, and we are pleased to exchange any article which may be out of condition.

NEW STOCK



THE GREAT NERVE FOOD AND FLESH BUILDER

VERY chemist holding stocks of IRVONA of the obsolete 3/- and 15/- sizes should return them to us, when they will be immediately exchanged for the NEW SIZES at equivalent value.

NOTE REVISED PRICES

12/- per doz. 1/3 size IRVONA. Trade Price 5/= ,, 48/-12/- ,, 115/-

Another line rapidly growing in popularity:—
"IRVOLAX" (the safe aperient). 12/- per doz. 1/3 size 3/- ,, (four times the quantity) 27/-

> Obtainable through the usual wholesale houses, or direct if cash sent with order.

WILLIAMS

27 Finsbury Street, LONDON, E.C.2

FOREIGN AND BRITISH WINES Liebig's Meat and Malt Wine (Robinson's Bull Head Brand.) Lifos Tonic Blood Wines Vin Ferri-Citratis B.P. English Port Style Sherry, Ginger, Orange, Cowslip, Raisin, Blackcurrant, Blackberry, Elderberry, Tent, Muscadine, Grape, Rhubarb, etc. 17/- Per Dozen (Bottles Included). "Oval" Quarts English Port Style 24/6 Per Dozen (Bottles Included). Samples Free to the Trade. B. ROBINSON & CO., LTD. PENDLETON - MANCHESTER. WRITE TO-DAY AND COMPARE OUR TERMS.



Captured Sunshine"

THE milk from cows fed on green grass which is grown under continuous rays of the sun contains those essential sunshineproduced constituents of milk, the Vitamins.

That is why Glaxo is manufactured in New Zealand, the premier dairying Dominion of the British Empire, where the cows live in the open air and feed on sun-bathed pastures all the year round.

Glaxo is a safe, pure milk—it contains no preservatives, no starch, no cane sugar; bacteriologically, it is the purest food ever made, and is guaranteed free from b. tuberculosis.

Its use is indicated in all cases in which the ordinary milk supply is not above suspicion.



The Super-Milk Food

Builds Bonnie Babies

GLAXO is manufactured in three strengths: HALF-CREAM (containing 14% Butter Fat); THREE-QUARTER CREAM (containing 20% Butter Fat); STANDARD (containing 25% Butter Fat).

Address all communications to THE SALES MANAGER GLAXO HOUSE, 56 OSNABURGH STREET LONDON, N.W.I



ROTEIN FOODS

An Open Letter to Pharmacists

II Queen Victoria Street, London, E.C.4.

Gentlemen,

January 11th, 1924.

The strong recommendations of the Medical and Dental Professions, entirely apart from the stimulus of our extensive Advertising Campaign in the Medical and Lay Press, continue to create an ever-increasing demand for these recuperative and tissue-repairing Foods.

The more you know about these preparations the easier it will be for you to talk about them to your

customers with knowledge and confidence.

The selling points of Bovo-Lactin Foods, as set forth

in our Press Announcements, cannot fail to strike you. Doctors all over the country who are prescribing these Foods to their patients for Pneumonia, Influenza, Gastric Disorders, Colitis, Neurasthenia, Insomnia, and the like distressing conditions, rely on you to be able to supply all Bovo-Lactin requirements on demand.

So do the Dentists who have patients really dependent on these nutritive Foods to tide them over the troublesome and debilitating period between extractions

and denture fittings.

In stocking and showing these preparations you are helping your Doctors and Dentists, their patients, and incidentally yourselves for there is a good P.A.T.A. profit for you in every transaction.

Yours faithfully, FOOD PRODUCTS LTD.

SPECIAL OFFER.—A free sample tin of Bovo-Lactin Chocolate Powder retailed at 3d. is supplied with every 1-lb. tin of Boyo-Lactin Chocolate Powder

Invalid Bovo-Lactin 3/9 P.A.T.A. 30/- doz. $(\frac{1}{2}$ -lb. Jars) 13/6 ,, 108/- ,, Bovo-Lactin Essence 3/9 P.A.T.A. 30/- doz. 11/6 ,, (½-lb. Jars) 92/- .. Bovo-Lactin Chocolate Powder 3/6 P.A.T.A. 28/- doz. $(\frac{1}{4}$ -lb. Tins) ... 1/3

FOOD PRODUCTS. Ltd.

11 QUEEN VICTORIA ST., LONDON, E.C.4

Sole Distributing Agents for the United Kingdom and Ireland: HENRY C. QUELCH & CO., 4-5 Ludgate Square, London, E.C.4 Foreign Agency enquiries are invited.

MOLGIA

in the sifter box with puff

One of the quickest sellers in your shop, and consequently one of the most profitable, is Poudre Nilde. Week in and week out the sales increase. Someone is getting new customers. Is it you?

Our advertising can only go half-way towards making new customers. other half rests with you, and with your windows and counter.

> We shall help each other considerably if you will link up with our Summer Advertising Campaign. Window and counter displays can do wonders. The profit on Poudre Nildé is generous and will pay you well for your efforts.

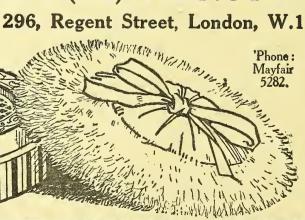
Made in six shades. Rachel, Naturelle, Blanche, Rose, Basanée, Indienne.

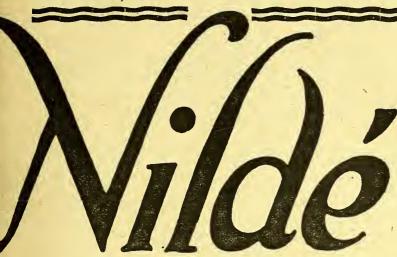
Handbag size, 1/-. Medium, 2/-. Large, 3/6.

Leather or fancy em-broidered Vanity Cases with mirror in lid. Small size 5/-. Medium 7/6. Large, 10/-.

All Nildé preparations show 331/3% profit on selling price

SOLE AGENTS: NILDE (Paris) AGENCY LTD.





for the dressing table in the new large box without sifter or puff

Specially manufactured to meet the persistent demands of public and trade.

P.A.T.A. 1/6

In six shades: Rachel, Naturelle, Blanche, Rose, Basanée, Indienne.

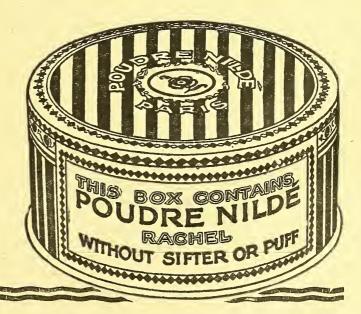
All Nildé preparations show 33½% profit on selling price

Sole Agents:

NILDÉ (Paris) AGENCY LTD.

296, Regent Street, London, W.1

'Phone: Mayfair 5282.





Parfumerie De l'Isle Notre Dame

OR a moderate priced line whose quality and "get-up" make it an all-the-year-round seller we recommend you to try

WATCH-SHAPE "ELSTER PLATZ"

Johann Maria Farina

EAU DE COLOGNE



In $\frac{1}{2}$ oz., 1 oz., and 2 oz. flasks.

> Artistic Show-cards on request.

OLD ENGLISH" Lavender Water in the same series, in green flasks.

PARTICULARS AND PRICES ON APPLICATION.

SPURWAY ET CIE, LTD.

89 Great Eastern Street. LONDON :: :: E.C.2.

Factories & Distilleries:

CANNES-GRASSE, RIVIERA.

Technical Laboratories: PARIS.

LEIPSIC NEW YORK KINGSTON (ONTARIO)

Telegrams Telephone "NEROLI, LONDON."

- BISHOPSGATE 1372.

DEARBORN (1923) LTD.

Gray's Inn Road, LONDON, W.C.1.

Toilet Specialties.

		Price	Selling
		per doz.	
		to Retailer	P.A.T.A
PILENTA SOAP	•••	10/-	1/-
PROLACTUM		40/	41
For the lips.	•••	10/~	1/-
PARSIDIUM JELLY	***	10/-	1/-
For wrinkles,	•••	10/-	• <i>t</i> =
ALLACITE OF ORAN	GE	- 4	
BLOSSOM	•••	22/6	2/6
A dressing cream.			
BORANIUM		22/6	2/6
A hair tonic.		00/0	- 10
CLEMINITE	000	22/6	2/6
COLLIANDUM		22/6	0/6
For a face tint.	•••	22/6	2/6
PERGOL		22/6	2/6
A deodorant,	•••	,-	_,0
TEKKO PASTE		22/6	2/6
Camphor cream.		·	
STALLAX	•••	22/6	2/6
For a shampoo.		04/0	0/0
JETTALINE	•••	31/6	3/6
PHEMINOL		36/-	4/-
A depilatory.	•••	00/-	/-
MENNALINE		36/-	4/-
For the evelashes.	•••	,	-/
MERCOLIZED WAX	•••	31/6	3/6
A face cream.			
STYMOL	•••	36/-	4/-
For oily complexions and			0/6
SILMERINE	•••	22/6	2/6
BARSYDE		22/6	2/6
Dandruff eradicator.	•••	/-	-/-
TAMMALITE		22/6	2/6
For grey and faded hair.			
LIQUID PERGOL		31/6	3/6
To check excessive perspir			0/0
BICROLIUM	•••	22/6	2/6
For whitening the hands.		31/6	9/6
For figure development.	•••	31/6	3/6
For figure development.			

The Products of

Messrs. PARKER. BELMONT & CO.

CLYNOL BERRIES {	36/- 58/6	4/- 6/8
	45/-	5/-
LIQUID NAIL POLISH	10/-	1/-

Stocked by ALL Wholesale Houses.

COLONIAL DEPÔTS AND AGENCIES.

Australia: ALL WHOLESALERS, & DEARBORN (Australia),
Ltd., Grace House, Clarence Street, Sydney.
South Africa: LENNON Ltd., Cape Town, etc.
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EVAN Williams "Graduated" Henna Shampoo should be recommended where more reflected tones are required. It gives a greater brilliancy than the "Ordinary," which is, however, quite suitable in the case of hair in perfect condition.

These two shampoos—the Evan Williams "Ordinary" and the Evan Williams "Graduated"—if shown on your counter will sell themselves and bring customers back for regular supplies.

You cannot afford not to stock

EVAN WILLIAMS Original Henna Shampoo

Write to-day for full particulars of trade terms.

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NUCTONE is quite different. It restores the colour gradually but permanently by the natural action of light and air. This saves all embarrassment. A few greying strands can be just as effectively treated as the whole head of hair and washing does not affect it. NUCTONE gives additional lustre and also has a tonic effect on the hair.

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The Manufacturers guarantee that NUCTONE is absolutely free from any combination of lead and sulphur, and contains no ingredients that can possibly injure the hair. NUCTONE can therefore be recommended with entire confidence to your customers.

Vuctone for GREY HAIR

Retail Price 6/6 per bottle. Price to you 52/- per doz.

In three grades:

NUCTONE for dark and medium hair, NUCTONE ECLAIRE for fair & auburn shades. NUCTONE CONCENTRE for Gentlemen.

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With Page - Barker's Scurf Lotion

For a limited period we will give one of these handsome Display Stands, as illustrated, with all orders of Three Dozen Page-Barker's Scurf Lotion. This is in addition to the free bonus of three 2/6 bottles. You also receive a generous supply of most attractive showcards and counter leaflets printed with your own name and address, and the lotion with all these selling helps comes to you Carriage Paid. Here is an opportunity for you to make a big display of quick-selling Page-Barker—the only lotion guaranteed to eradicate Scurf. You know how quickly displayed goods sell—how slowly those that lie on a shelf amongst other merchandise. Your profit on one dozen Page-Barker alone is 12/-, but note carefully that

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18/- dozen-Retails at 2/6

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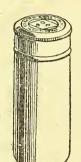
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SHAVING STICK In nickel case enclosed in carton. 9/3 per dozen.

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No. 4800. 5 ozs. (about). 12/6 per doz.



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Still the Favourite

No. 25. 3 ozs. (about), with Spirit. 8/6 doz. Large size, 14/- doz.



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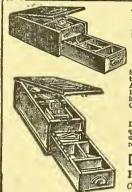
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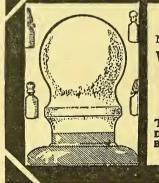
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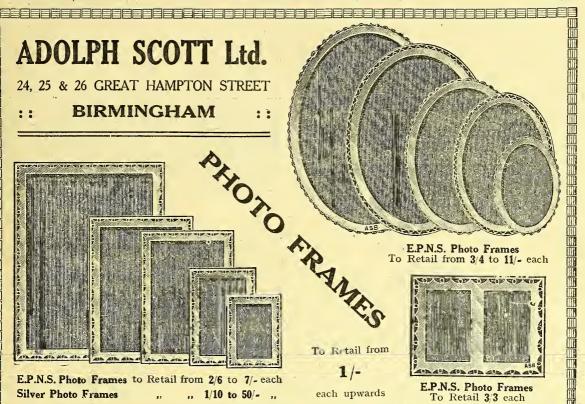
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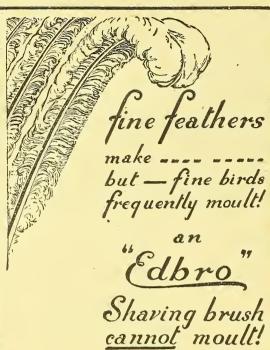
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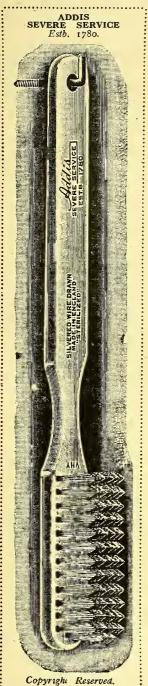
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This is typically an English Style Gentleman's Brush, made of Unbleached Bristles, with small serrates on a plain straight handle.

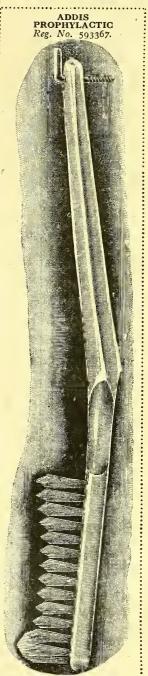
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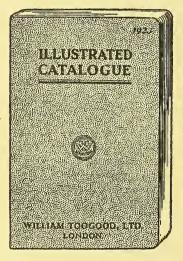
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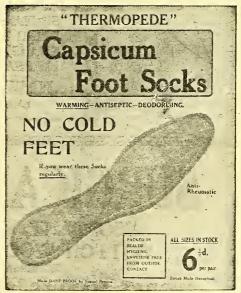
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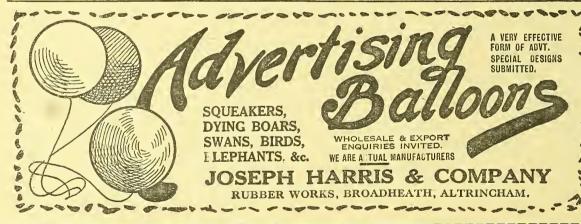
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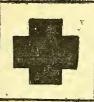


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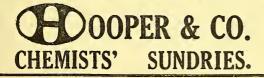
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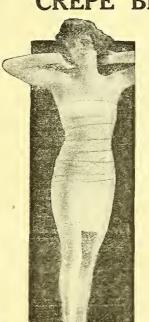


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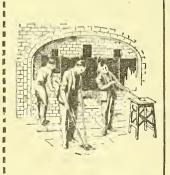
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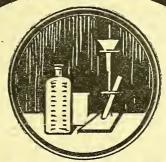
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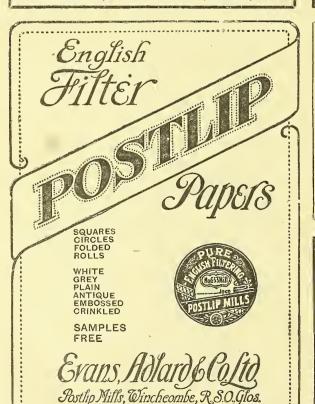
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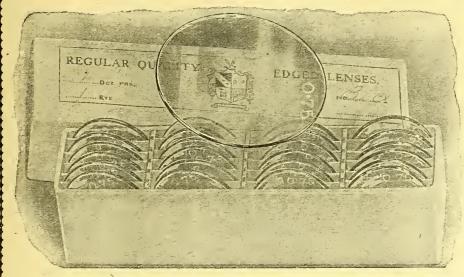
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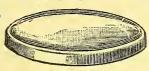
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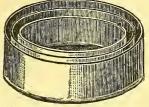
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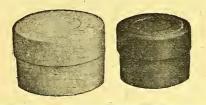




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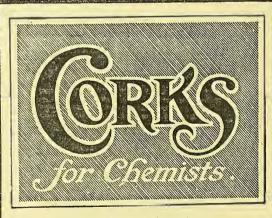
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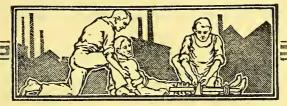
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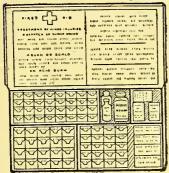
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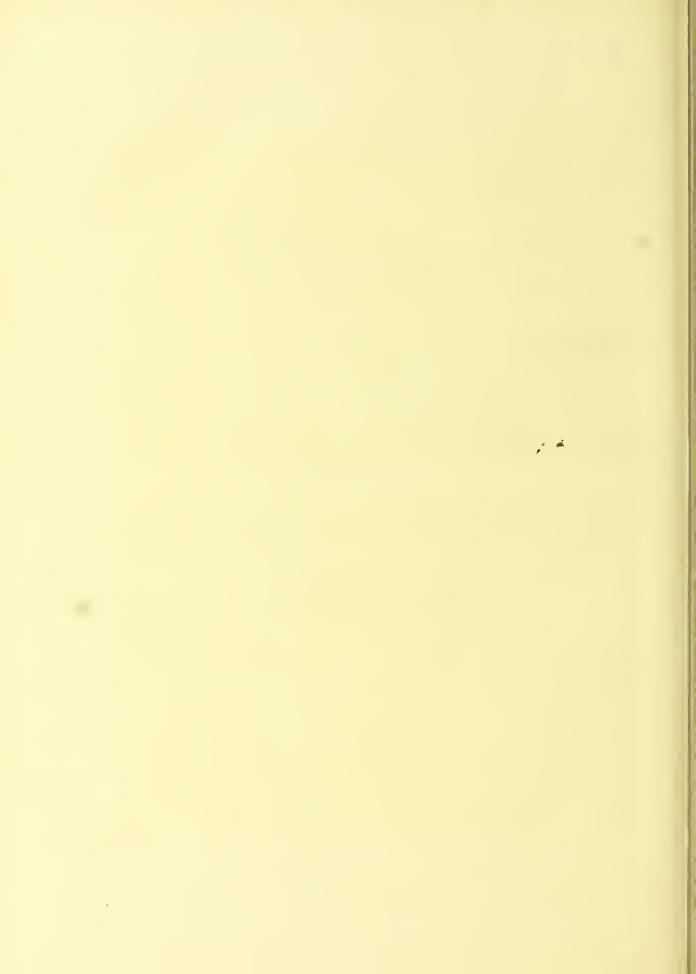


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I do not for a moment think I could be without the C. & D., as 1 have been a regular reader for the past twenty years. With best wishes. . . —L. L. B. (31/12).

... take this opportunity of thanking you for the Diary, which I much value. It is astonishing how competent an assistant I have for a salary of £1 yearly. With New Year's greetings. ...—H. H. (1/1).

The occasion must not pass without our referring to the fine successes registered with the Summer Number and the 1924 Diary, and the very high standard which each succeeding weekly issue maintains. The Special Issue and Diary must have brought you many sincere congratulations, but we feel that we doubly benefit—as ordinary subscribers getting real value for our subscription, and as advertisers in having such a fine medium for the carrying of our message week by week to our professional friends.—A. C. (31/12).

English and Welsh News

The Editor would be obliged if subscribers will send him marked copies of newspapers containing items of interest for insertion in this or other news sections.

Fairchild Scholarship and Prizes

The syllabus for 1924 of the Fairchild Scholarship and Prizes is now ready, and can be obtained from Mr. Herbert Skinner, Ph.C., secretary to the Committee of Trustees, Albert Chambers, 64-65 Holborn Viaduct, London, E.C. We notice several alterations in the arrangement of the subjects of the examinations, which make for preciseness. The subjects are now (1) chemistry, (2) physics, (3) botany, (4) practical pharmacy and prescription reading, and (5) business knowledge. Apprentices and students for whom the competition is specially intended should apply at once for copies of the new

A County Council Sells Tooth-brushes

A letter was read at a meeting of the Devon Education Committee at Exeter, on January 3, from the Retail Pharmacists' Union, protesting against the authority supplying tooth-brushes to parents at a price below that at which rural chemists can retail them. The Union contended that the County Council ought not to act as a trading body in competition with legitimate traders, and pointed out that the members of the Union stocked tooth-brushes at a low price. The chairman explained that the brushes were bought by the Committee at the suggestion of the medical officer of health for purchase by the parents of children attending the elementary schools. The medical officer of health said he did not see that the Union could legitimately complain, as the purchase of the brushes, which were British-made, was following out the Committee's practice in regard to milk and other things. Devon was not alone in regard to this matter. The Committee bought a gross at a time, as required, and it was impossible for a chemist in the rural districts to retail the tooth-brushes at the price. Mr. J. S. C. Davis, in proposing that the Committee take no action in regard to the protest, observed that the tendency was for them to be controlled first by one trade union and then another. The Committee agreed to the motion.

Selling Power of Light

At a meeting of the Incorporated Sales Managers' Association, held in the demonstration room of the British Association, field in the demonstration room of the Bress.
Thomson-Houston Co., Ltd., 15 Savoy Street, London,
W.C., on January 7, Mr. Bush (lighting service department of the company) gave an interesting lecture on
"The Selling Power of Light." The object of the lecture was to indicate how valuable suitable lighting can be to the shopkeeper. Some very pertinent points were made. Mr. Bush showed that candle-power is a term for scientists only. Intensity of illumination is the accurate measurement of lighting. This is determined by the estimation of "foot-candles," and the audience were provided with an ingenious instrument to make their own tests of the lighting of the room. The effect of good lighting on sales was, in one example quoted, an increase of 29 per cent. Light, said Mr. Bush, is the biggest salesman at the smallest salary. The advance is ideas aggrading efficient sheet lighting in constitutions. in ideas regarding efficient shop lighting is comparatively modern, but within the next decade a much greater advance was predicted. Some indication of what is to come was shown in a series of experiments made on a window-show. After the wasted effect of ordinary glare lamps (most of the illumination being lost) was exhibited Mr. Bush showed how the illumination of the window can be built up by lamps and reflectors. Coloured lightcan be built up by lamps and reflectors. Coloured lighting produced striking results, and the pièce de résistance was a rainbow effect of automatically changing coloured lights. It appears that stage lighting with "spot" effects is to be pressed into the service of shopkeepers at comparatively cheap rates. This colour demonstration is a new development, and this is the first occasion it has been exhibited. A point worth noting in window-displays was mentioned—namely, that some shops value their windows at £200 a week windows at £200 a week.

Institute of Chemists-Opticians

A meeting was held at the Institute, Oakley House, Bloomsbury Street, London, W.C.1, on January 3, Mr. S. W. Harrison in the chair. It was announced that the President (Mr. S. V. Brook) is rapidly recovering from his illness. The members of the council present were:—Messrs. W. T. Stoyle, G. B. Brook, A. C. Roskrew, and Miss E. G. Laws. Messrs. Roskrow, Dan Davies, Brook, and Stoyle submitted the new form of syllabus, which, after discussion, was referred to the council for consideration. Mr. Dan Davies then expounded the suggestions for addition and alteration of rules, which were also sent on to the council for deliberation. The next general meeting was postponed until the week of the Chemists' Exhibition. Mr. Laws stated that 67 new members were enrolled during December. The next examination will be held on January 25, 1924. All members contemplating sitting for that examination should apply in writing to the general secretary, Mr. J. J. Laws, 45, Fulham Road, South Kensington, S.W.3, not later than January 17, to whom any chemist who is practising optics may apply for entry forms. Any such chemist can at present join the society with or without a certificate in optics. Mr. S. N. Pickard, J.P., Ossett, Yorks, who has been elected as the society's representative for Yorkshire and the North, will be pleased to receive applications for membership.

Poisonings

The following cases of fatal poisoning, among others, have been recorded since our last report:—

At Portsmouth, Mary Ann Wingrove, 8 Hope Place, committed suicide by drinking lysol while of unsound mind. Three similar cases in the borough have been reported recently.

At an inquest at Mansfield Woodhouse, on January 5, on the body of James Harvey (62), it was stated that for forty years he had been taking laudanum, and that he had latterly been drinking two or three pints a week. A medical witness said that he was called in early in December, and found the man unconscious, suffering from opium poisoning and heart trouble, but did not see him again till January 1, when he found him in a similar condition. The Coroner: I asked a Mansfield chemist to-day for opium, but could not get it. A verdict of "Death from chronic opium poisoning" was given.

Inquests

An inquest was held in St. Pancras (London), on January 3, on the body of Edward Charles Lowe (32), described as a chemist. It was stated that the deceased had been granted a temporary pension by the Army authorities, his military service having terminated on account of ill health. The pension ceased, and Lowe was found dead from an escape of gas. A "Misadventure" verdict was given.

An inquest was opened, at Grimsby, on January 4, on the body of Mr. William Hughes Ridge, dentist, Freeman Street, who rose to the rank of lieutenant-colonel during the war. The widow told the coroner that before receiving his discharge her husband's health completely broke down. Mr. Elijah Sigley, chemist and druggist, manager to Moores (Chemists), Ltd., Freeman Street, stated that on January 1 the deceased came into the shop and purchased cyanide of potassium. Witness asked him the usual question as to why he wanted it, and was told that it was for gilding purposes. The Coroner: And it should not have been used in a dental surgery?—No. The percentage of prussic acid contained in cyanide of potassium is 41, is it not?—I could not say without looking it up. A medical witness, who had conducted the postmortem examination, said he could find no trace of hydrocyanic acid. The inquest was adjourned to January

Birmingham

Among subscribers to the centenary fund of the Birmingham and Midland Eye Hospital are Alderman W. A. Cadbury (£100), Mr. Alfred Southall, Ph.C. (£10), and Southall Brothers & Barclay, Ltd. (£5 5s.).

A lecture on "Chemistry in the Kitchen," illustrated by experiments, was recently given before the girls of the local high and secondary schools, by Miss A. R. Russell, B.Sc., who is well known to students of the Technical School in connection with their chemistry studies.

Liverpool

Thermogene wool is being advertised by a striking Arctic poster picture at the Exchange Station.

Shoplifting has been rife in large stores at the turn of the year, and precautions have had to be taken in the pharmacies. In one case a 39s, bottle of perfume vanished.

Sheffield

The annual hot pot supper of the local society is to be beld on February 21, at Atkinson's Restaurant, The Moor. An excellent programme is promised.

The letter just received from the Insurance Committee in no way alters the present terms for Insurance dispensing. It has been sent out in order that the matter may be considered at a later date.

Miscellaneous

PHARMACY HOCKEY LEAGUE.—In a match played on January 5, J. W. Bush, Ltd., beat "Allenburys" by 2—1 in a fast and evenly contested game.

FIRE.—A serious fire occurred on January 7 at the shop of Mr. C. G. Sansom, chemist and druggist, Mansfield. Mr. Sansom, while attending to a customer, accidentally knocked over a small paraffin stove, and in a few minutes the whole shop was ablaze, the premises being practically gutted.

In the courts.—At Nuneaton, on January 7, Frederick Hill, described as a chemist's assistant, was remanded on charges of assaulting young women and stealing a handbag and a purse from one of them.—At Newcastle-under-Lyme, recently, Charles Ierston, Church Street, Cross Heath, was fined £5 for practising as a dentist without registration.—At Doncaster Police Court, on January 7, David Williams, ex-miner, charged on remand on five counts with inflicting grievous bodily harm, and on four counts with obtaining money by false pretences (C. & D., December 29, p. 884), was committed for trial.

Reference no Hospital.—A circular letter sent out on behalf of the committee of the Refraction Hospital, Newington Causeway, London, S.E.1, states that within ten months of the opening nearly 100 students have enrolled, and over 600 patients have been treated. The number of founders to date is 377, with a total sum of nearly £1,000. The unexpectedly large influx of students has resulted in a serious congestion of the ophthalmoscopic department, and an annexe containing five additional dark rooms has had to be built. Correspondingly, the facilities for subjective sight testing and instrumental observation require to be considerably augmented in order to cope with the rapidly increasing number of patients attending, and an appeal is made for further support. The amount needed for these extensions of premises, and the new equipment, is about £500.

Conspiracy charge.—At Marlborough Street Police Court, London, on January 3 and 5. Noel Blake Ducker, company director, was again charged on remand with conspiracy in respect of income-tax and excess profits duty (C. & D., December 29, p. 884). Evidence as to the management of the affairs of Inecto, Ltd., was given by Mr. Hodgson, chartered accountant, and Mrs. Ward, Hadley Wood, who stated that her duties were to interview prospective clients and quote fees for the application of Inecto. These varied from £6 6s. to £26 5s., and from £150 to £250 would be taken in a week. There were five salons, and these were always booked up. The fees agreed upon were entered up in code, the words "give thanks" standing for £15 15s. In cross-examination, witness admitted that eventually she was discharged at the instance of Mr. Noel Ducker but denied saying she would be revenged upon him. The case was again adjourned.

Scottish News

A well-known Ayrshire chemist has drawn a doll's house in his golf club's "free sale."

Mr. J. Walker, chemist and druggist, has taken over the business of Mr. R. Wilson, chemist and druggist, 46 Ann Street, Greenock.

Mr. W. Greenlie, chemist and druggist, has taken over the business of Mr. P. M. Hancock, chemist and druggist, 141 Glasgow Road, Blantyre.

Mr. J. Craig, chemist and druggist, late British assistant at the Pharmacie Internationale, Lausanne, Switzerland, has opened a pharmacy at 23 Evan Street, Stonehaven.

At Edinburgh Sheriff Court, on January 7, a man named Gorman, described as a street singer, was fined 10s., or ten days' imprisonment, for being in unauthorised possession of morphine.

At a recent meeting of Dalbeattie Merchants' Association, Mr. G. Campbell, chemist and druggist, was appointed secretary, and Mr. R. J. Shennan, chemist and druggist, was elected to the management committee.

Ayrton, Saunders & Co., Ltd., manufacturing chemists, Liverpool, have increased their representative staff in Scotland by the appointment of Mr. R. C. Paterson, a member of their indoor staff, who will take over a portion of the territory previously covered by Mr. W. H. Chambers.

The following are among the business changes which have taken place in Aberdeen lately:—Mr. A. P. Wallace, 96 Victoria Road, has opened a branch at 14 Bridge Street; Mr. J. C. Mowat, chemist and druggist, 46 Commerce Street, has opened at 79 Park Street; Carmichael & Wallace, chemists have commerced business at 30 & Wallace, chemists, have commenced business at 30 Market Street; and Mr. A. M. Gair, chemist and druggist, has taken over the business of Mr. P. D. Milne, chemist and druggist, 39 Market Street.

The following are among the grants which the Board of Agriculture has been authorised to allocate from the of Agriculture has been authorised to another the sum of £150,000 provided for agricultural development and research in Scotland under the Corn Production (Repeal) Act, 1921:—Animal Diseases Research Association £18,500; Rowett Research Institute, £11,000; Edinburgh and East of Scotland College of Agriculture, acquisition, equipment, etc., of college farm, £8,000; Post-graduate scholarships (five years at £1,080 per annum), £5,400; Royal (Dick) Veterinary College, £3,500; Glasgow Veterinary College, £100.

Fife

The name of ex-Provost William Smart, chemist and druggist, Buckhaven, is mentioned as that of a likely Labour candidate for East Fife at the next election.

Mr. David Gilmour, Ph.C., Dunfermline, who has been session-clerk of Queen Anne Street Church for thirtytwo years, has been presented on retiring with a hall clock.

"There is a decided decline in the demand for toilet soaps from chemists," writes a correspondent, "and the reason advanced is that many firms formerly keen on doing business only with the chemist are now selling their goods to all and sundry. Nor does this apply to soaps alone. It is regrettable also to find profit margins dwindling."

Glasgow

Mr. A. L. Rankine, chemist and druggist, has commenced business at 12 Shaw Street, Govan.

The number of chemists' shops in Glasgow at the year ended December 1923 is 295, an increase over the previous year of thirty-two.

Mr. A. Crawford, chemist and druggist, has taken over the business formerly carried on by Miss E. C. Crawford, chemist and druggist, 1059 Duke Street. (See C. & D., September 8, p. 355.)

Irish News

Mr. J. Hall, M.P.S.I., Larne, was returned unopposed on January 6 as urban councillor for the Inver Ward of

Mr. William Smullen, L.P.S.I., has disposed of his pharmacy, 386 South Richmond Street, Dublin, to Mr.

John Fitzpatrick, Ph.C.

Mr. Edward McManus, Ph.C., who has disposed of his business, the Medical Hall, Lisnaskea, co. Fermanagh, is opening a pharmacy shortly in Main Street, Chapelizod, Dublin.

A Medical Hall has been opened in Lower Cork Street, Mitchelstown, co. Cork, by Dr. J. O'Dwyer, where he has acquired the business premises of the late Dr. Connolly.

At Ballymena Petty Sessions, on January 4, the application of Gilmer, Ltd., chemists, and Mr. John A. Woodside, Ph.C., for a renewal of wine licences was

The amount allowed for medical charities to London-derry Union was £2,400. During 1923, free medicine was provided to a weekly average of 145 persons. The dispensary doctors attended 7,562 cases gratis.

At Coleraine Petty Sessions a summons was brought under the Sale of Food and Drugs Acts against a butcher for using sulphurous acid as a preservative in minced meat. Counsel for the prosecution said a commission was sitting in England with reference to the nature and quantity of preservatives in foodstuffs. Pending the issue of the commission's report, the case was adjourned.

North Irish Pharmacists' Meeting

A MEETING of the pharmacists of Northern Ireland was held on January 2, in the Shaftesbury Restaurant, Belfast, to receive the report of the subcommittee relative to the negotiations with the Chemists' and Druggists' Society of Ireland as to the abolition of the registered druggist grade. The following resolutions also appeared on the

That definite powers be given the subcommittee to deal with the C. & D. question.

That all pharmaceutical chemists in the North of Ireland, not already on the general committee, be added thereto.

Mr. James Guiler occupied the chair. There was a large attendance. In the unavoidable absence of Mr. James Dundee, Mr. J. C. Culbert acted as secretary. The chairman hoped that no members of the Executive Committee appointed by the general licentiates would feel aggrieved that they had not been called together before that meeting. The reason, he should explain, was that they felt there would have to be a general meeting in any event. The Northern Home Office was anxious they should get along, without further delay, and so to save time they thought it better to call that meeting.

Mr. McKnight asked who had been summoned to the meeting. He knew two licentiates who had received no

The Chairman said they aimed at sending circulars to every licentiate. It was very difficult to get a complete list. The calendar was not quite right. Employers had been asked to send in names of licentiates in their employ-

ment, and in every case where they did so notices had been sent. They would welcome every name.

Mr. A. Wilson and Mr. A. W. Mann expressed the opinion that it was a pity that the proposals to come before the meeting had not been sent with the circulars.

Mr. Mcknight thought that the meeting was unrepresentative.

Mr. Culbert said if they sent out the proposals, and only got 30 or 40 replies, would that bind the trade, if the others did not take the trouble to answer.

THE CHAIRMAN'S SUMMARY

No one, however, rose to move the adjournment of the meeting, and the Chairman proceeded to give a résumé of recent events. They had submitted, he said, their proposals to the Chemists' and Druggists' Society, and the President said they could not see their way to accept them. The pharmacists then asked for the druggists' proposals, which were sent, and turned down at once. It seemed, however, to be the desire of the Home Office that the trade should come with a united scheme, and the idea of doing away with the Registered Druggist examination came up. Whether the scheme was a wise one or not was a matter for consideration. The sub-committee of the pharmacists turned down those procommittee of the pharmacists turned down those proposals, and drew up others, which he read. (C. & D., January 5, p. 12.) Proceeding, the chairman said the other side seemed to be anxious to perpetuate the title "chemist and druggist." The pharmacists objected to that, but agreed to give the title "dispensing druggist." The druggists decided that these proposals would not meet with their approval. The druggists did, to a certain extent, agree with Nos. 2, 3 and 4, but they would not entertain No. 1. The proposals put forward were more lenient than the examination which chemists and druggists who went up in 1875 had to pass. The and druggists who went up in 1875 had to pass. subcommittee had gone beyond that, and yet the drug-gists were not satisfied. They would not accept the proposals. Many druggists over ten years wanted to qualify as pharmaceutical chemists without passing any examination whatever. As pharmacists they had gone as far as they possibly could, and it was for them to approve of what the subcommittee had done. They would, he supposed, have now to go to the Home Office, and tell them what they had done, and that they could not come with a conjoint scheme. The Home Office did not care whether there were two grades or one. They wanted the trade to come together, and, if the trade could not, the Home Office would have to do something. The Home Office said if there was an agreed scheme there might be a better chance of getting it through than if they went with a different scheme. The subcommittee was anxious to serve the licentiates as best they could and to get an agreed scheme had to give away something. The other side had no desire to give away anything, and had turned down the last proposals offered them, thinking that if they went to the Home Office they would get more than the pharmacists were prepared to give them. Whether they would or not rested with the Northern Parliament.

DISCUSSION

Mr. Todd and others said that, seeing the Government did not care whether there were two grades or not, they

should go on as they were at present.

Asked would the registered druggists agree to go on as heretofore, the Chairman said he could not answer the question. If the pharmacists went to the Home Office they would begin at the beginning, and would not start

with the present proposals as a basis.

Mr. Culbert said that in No. 1 the crux of the question was relative to twenty years in business. The point at issue as to examination in the case of those men. it had been suggested, should be left to the Home Office. The point now was, would that meeting agree they should not go any further with clause No. 1? The druggists wanted instead of the proposal of the pharmacists to have

a test in practical dispensing only.

Mr. Adams asked how many registered druggists might come in under the twenty-year clause-men in business for

themselves twenty years. The CHAIRMAN said the names on the calendar registered before 1903 were 182. He thought 130 would be

nearer the number. Mr. Adams said to-day the number might not be over 50, and that was a small number to fight about.

Mr. Wilson said Mr. Storey had conducted the chemists' and druggists' campaign very cleverly and ably, and the whole trade seemed cowed and to have its tail between its legs. The pharmacists could have the medical men and the universities at their back and could prevent Mr. Storey running away with his ideas.

The CHAIRMAN said both grades would, of course, be under the one society to be formed for Northern Ireland. There should be no misunderstanding about that.

Mr. Hogg: I would take no notice of these proposals. We have gone as far as we can.

Mr. McDowell said a man of twenty years' standing had no right to come in by the back door if he was not capable of passing an examination. The pharmacists had gone too far.

Mr. HARDY said he regretted the Government's decision to form a Northern Society. The pharmacists had gone as far as they could to meet with the wishes of the Home Office in presenting an agreed scheme to the druggists. There was a proposal on the agenda to give plenary powers to the Committee, but he would not favour that, as the Committee was not representative of the country pharmacists, who had more opposition, sometimes unscrupulous opposition, from druggists.

Mr. CULBERT said the Government asked them in June, 1923, to prepare a scheme. It was now January, and were they to turn down everything that had been done? The Government wanted to have this Bill drafted for the beginning of the session. He proposed a resolution to the effect that the meeting express the opinion that the subcommittee had gone as far as they could, and that they be instructed to go no further.

Mr. HARDY seconded, and said they were as they were if the druggists did not accept the proposals. In any event the druggists could not be done away with for the next thirty or forty years, so perhaps it would be better

to remain as at present.

In reply to a query, Mr. Culbert said his resolution related to the one point in dispute—the examination or the tests.

Mr. HARDY: No. If you must go to the Home Office,

we must go de novo. The CHAIRMAN said that the druggists' acceptance of Nos. 2, 3 and 4 clauses was provisional on an arrangement as to No. 1.

Mr. Culbert: My idea is to exclude the three clauses

we have agreed on. After protracted discussion Mr. Wilson urged an aggressive policy. They should go to the Government and ask them to do away with the R.D. examination, and let

the druggists see what they could get.

The Chairman suggested that the motion should confine itself to expressing approval of the length the subcommittee had gone.

RESOLUTIONS PASSED

The resolution was amended to read as follows:-That this meeting approves of the action of the sub-committee, and agrees that no further concession be made. and was passed unanimously.

Mr. HAWTHORNE moved that the subcommittee be empowered to go to the Home Office and negotiate, but this was not seconded.

Mr. Wilson urged that the subcommittee be reconstituted, and Mr. Hardy urged the inclusion of country members.

After considerable discussion it was agreed to add the After considerable discussion it was agreed to add the following to the subcommittee, on the motion of Mr. Hardy, seconded by Mr. J. Hewton:—Messrs. J. E. Connor, J.P. (Newry), R. F. McCartney, J.P. (Coleraine), A. C. McBride (Armagh), J. Maxwell (London-derry), and W. S. Taylor (Enniskillen). On the motion of Mr. Culbert, the name of Mr. S. S. Badger (Magherafelt) was also added. It was also agreed to add the names of Mr. J. Adams and Mr. R. W. McKnight to the city members of the subcommittee: that provincial members. members of the subcommittee; that provincial members of the subcommittee attending morning meetings be paid travelling expenses; and that general meetings be advertised in the daily Press. Discussion took place next as to whether plenary powers should be given the subcommittee, and it was eventually resolved, on the motion of Mr. Ferguson, that the subcommittee be given power to deal with the whole Bill, on the understanding that they report periodically to general meetings or otherwise. On the motion of Mr. Hall, seconded by Mr. Hewton, all pharmaceutical chemists in Northern Ireland not already on the general committee were added thereto.

Pharmacy in the Argentine

THE exercise of pharmacy in the Argentine is based on a law promulgated in 1877, and the necessity of remodelling the existing regulations to meet present conditions has long been felt. At the request of the National Health Conference the Argentine National Society of Pharmacy has elaborated the drafts of three laws dealing with the exercise of pharmacy, the sale of narcotics, and the creation of a permanent pharmacopæia commission respectively. The first stipulates that only a pharmacist holding a qualification granted or recognised by a national university may be the proprietor of a pharmacy or drug store in the republic; an exception may be made in the case of businesses established prior to the promulgation of this law, provided that each business is managed by a qualified pharmacist. No pharmacist will be permitted to own, or to manage, more than one pharmacy or drug store; offences against this provision will entail loss of the right of exercising the profession for a period of six months, and for a repeated offence the right to exercise the profession will be withdrawn. The pharmacist is required to analyse all his drugs and is personmacist is required to analyse an first drugs and is personally responsible for the purity and genuineness of all products sold by him, or which he uses in making up preparations, whatever may be their origin. The sale of all substances possessing medicinal properties and supplied as remedies is limited exclusively to pharmacies. Inspectors of pharmacies are forbidden to be proprietors or managers of businesses, to manufacture specialities, or to deal in drugs or remedies. All prescriptions will have to be entered into a register the pages of which are numbered and stamped by the National Health Department. Pharmacists will be forbidden to keep consulting ment. Pharmacists will be forbidden to keep consulting rooms for the use of patients. Assistants employed in pharmacies must possess the same qualification as is required of owners. Pharmacies must remain open during certain fixed hours, and outside these hours they will be permitted to sell only certain drugs, specialities, etc., a list of which will be issued by the National Health Department. Following the death of a pharmacist his legal heirs may continue the business, under the management of a qualified pharmacist, for a period of four years. Various fines and penalties are provided for offences against these provisions, and it is interesting for offences against these provisions, and it is interesting to note that these fines will be collected by the National Health Department and utilised to defray the expenses of combating tuberculosis in the republic.

The second law, which deals with narcotics, provides that opium and its preparations, Indian hemp, morphine, heroin, cocaine, their salts and derivatives, may be imported solely through the port of Buenos Aires. Importers and manufacturers of these products will have to register every year with the National Health Department, and may not import or export any of these products except on obtaining a licence from this department. Each transaction will have to be entered into a special register, and a balance struck every month. Manufacturers and dealers of specialities containing any of these substances will be required to enter all purchases, amounts used for manufacturing purposes, and sales in a register. Official prescription forms for narcotics, numbered and stamped by the National Health Department, will be supplied to medical practitioners, dental and veterinary surgeons. The penalties provided for offences against this law include imprisonment up to three years and withdrawal of the right to exercise the medical, pharmaceutical, dental, or veterinary profession, as the case may be, for a period of two to six years.

PHARMACOPŒIA COMMISSION

The third proposal, which aims at the creation of a permanent pharmacoposia commission, provides that this body shall consist of the following members: The president of the National Health Board (as president); the national inspectors of pharmacies; six pharmacists in business selected by the National Health Department, and three delegates from each of the following: The schools of medicine, chemistry, pharmacy, and veterinary medicine of the National Universities of Buenos Aires,

Cordoba, La Plata, Litoral, and Tucuman; the poor-law authorities of Buenos Aires; the National Bacteriological Institute; the provincial health authorities; and, finally, the pharmaceutical associations. It is proposed to entrust this commission with the task of elaborating a new edition of the pharmacopœia every ten years. It is rather strange to find a provision to the effect that each copy of this work will be numbered and stamped by the National Health Department, and a copy will be delivered free of charge to every pharmacist. A new edition will enter into force ninety days after its distribution. In the explanation of this last proposal, elaborated by Dr. A. Badia, reference is made to the pharmacopæia commissions in existence in other countries. Dr. Badia states that the "British Pharmacopæia was prepared and published under the direction of the General Council of Medical Education of the United Kingdom, on which are directly represented all the universities and scientific bodies of the nation, including the Pharmaceutical Society of London and the Pharmaceutical Society of Ireland. H.M. the King, on the proposal of his Privy Council, nominates five members, while five members are directly elected. The General Council solicited the co-operation of all the members of both professions in the United Kingdom and in its vast Colonial Empire, receiving great assistance from the medical and pharmaceutical authorities of its principal colonies."

Colonial and Foreign News

Organotherapeutics in Spain.—The Spanish Royal Board of Health is at present engaged in elaborating regulations concerning the manufacture and sale of organotherapeutic preparations. In this connection it may be mentioned that Spanish pharmacists have for some time past been opposing the claims of physicians to manufacture biological preparations, maintaining that legally the right to prepare remedial agents of whatsoever nature is vested solely in members of the pharmaceutical profession.

SPECIALITIES IN GREECE.—In connection with the new regulations concerning the importation and sale of foreign pharmaceutical specialities (C. & D., II, 1923, pp. 382 and 572), the Greek Government has issued a supplementary order, whereby the importation of not more than 100 packages of any one preparation coming within this category will be permitted, exempt from compliance with the prescribed formalities, provided the importing pharmacist, physician or wholesale house gives an assurance to the effect that the preparation is required solely for experimental or scientific purposes, and not for sale.

Co-operative buying in Rumanian.—At a recent meeting of delegates of the Rumanian Association of Pharmacists, it was decided to undertake the purchase of drugs on a co-operative basis for the benefit of the members of the Association. For the present it was decided to limit the purchases to the following drugs: Acetylsalicylic acid, amidopyrin, codeine hydrochloride, and phosphate, iodine, menthol, potassium sulphoguaiacolate, pyramidon, quinine hydrochloride and sulphate, sodium iodide, and theobromine sodio-salicylate. Should this initial attempt prove successful, it is proposed to conclude arrangements with foreign manufacturers for the direct supply of pharmaceutical chemicals, etc., on a large scale.

Offended Professional dignity.—The Council of the (official) Association of Pharmacists of the province of Cagliari (Sardinia) has resigned in a body, and in a letter to the prefect of the province it explains the reasons which have prompted it to take this step. In the notice advising the Council that a meeting of the provincial board of health would be held on a certain date, the hour for which the meeting had been arranged was omitted. Further, in spite of repeated requests, it was impossible to obtain a copy of the agenda, and, finally, the Council was not officially informed that a matter of interest to the pharmaceutical profession was down for discussion. Therefore, it regards this incident as a want of consideration for the pharmaceutical profession, and an insult to its dignity.

Legal Reports

Boric Acid as a Preservative.—At Marylebone Police Court, London, on January 4, the North-West London Co-operative Society, Ltd., West Hampstead, were summoned for having sold pork sausages containing 47 gr. of boric acid per lb. Mr. Freke Palmer appeared for the defence. The medical officer of health for Hampstead gave evidence to the effect that boric acid in so high a proportion was harmful. Cross-examined, he admitted that it was allowed in cream to the extent of 0.4 per cent., and said that was so "for some reason with which no sanitarians agree." Mr. Freke Palmer quoted a case in which it had been held that 70 gr. per lb. was not too much, and another in which a conviction for 20 gr. was quashed. The magistrate said he found that boric acid was injurious to health when mixed with sausage meat, and the amount in this case was excessive. A fine of £3, with £3 3s. costs, was imposed.

Dispensing Tested.—At Kensington (London) Petty Sessions, on January 1, Mr. Isaac Thomas Lloyd, chemist and druggist, 267 King's Road, Chelsea, was summoned for having sold a "compound drug" not in accordance with the demand of the purchaser as comprised in a prescription. Mr. H. Glyn-Jones, barrister, appeared for the defence. The certificate of the public analyst (Dr. Rideal) stated that the sample submitted contained 9.8 minims of weak tincture of iodine per fl. oz., showing a deficiency of 34.6 per cent. The certificate indicated that the sample had undergone no change which would affect the result of the analysis. Evidence of purchase having been given, the inspector, in reply to Mr. Glyn-Jones, said he was confident that the bottles he took were quite dry and clean. They had been cleaned with cold water. They were bottles kept specially for the purpose. They were quite new, and had never been used before. Dr. Rideal gave evidence in support of his certificate. He was cross-examined to show that since the purchase the medicine had deteriorated. His experiments had shown, he said, that there was a loss of strength in medicine of this kind of one minim a week. Exposure to the action of the cork and also evaporation affected the strength. In reply to Mr. Glyn-Jones, the Bench said they considered he had a case to answer; he then asked for an adjournment so that the third sample might be sent to Somerset House. The case was adjourned to February 5.

Gazette

Partnership Dissolved

Fehr, F. E., Faure, H. M. F., and Blattman, R. T., Baltic House. 27 Leadenhall Street, London, produce merchants and brokers, under the style of Thornett & Fehr.

Bankruptcy Acts

RECEIVING ORDER

Duncan, H. R., 8 East Reach, Taunton, Somerset, cliemist.

Bankruptcy Reports

Re Christopher James Ritson, 228 Sheffield Road, Tinsley, Sheffield, druggist.—The first meeting of the creditors of this debtor was held on December 19 at the Official Receiver's Offices, Figtree Lane, Sheffield. The statement of affairs showed a deficiency of £364. Debtor attributed his failure to slump in trade, depreciation of stock, stoppage of credit and lack of capital. It appeared that debtor started business in 1910. The matter was left with the Official Receiver as trustee of the estate.

It is announced that Boots, Ltd., have purchased premises at 18 George Street, Plymouth, for the sum of £25,000.

New Companies

and Company News

P.C. means Private Company and R.O. Registered Office

FRENCH HOUSES, LTD. (P.C.).—Capital £5,000. Objects: To carry on the business of spinners or manufacturers of or dealers in cotton, lace, etc., and manufacturers of and dealers in perfumery, etc. R.O.: 110. Sandgate Avenué, Folkestone.

METALLURGY, LTD. (P.C.).—Capital £5,000. Objects: To carry on the business of importers, exporters, warehousemen, carriers, metallurgists, mechanical and cleetrical engineers, chemists, etc. The directors are: J. W. Griffith, F. H. Litton, G. Ghion, B. M. de Westgaver, and F. Sengier. R.O.: 9, Dawson Street, Dublin.

Mills' Patent Pneumatic Rubber Shaving Brush Co., Ltd. (P.C.).—Capital £900. Objects: To adopt an agreement with T. C. Mills and to carry on the business of rubber shaving brush manufacturers, as formerly carried on by the said vendor at 1 and 2 Swan Mead, London, S.E.I. The directors are: T. C. Mills and Miss F. Fleming.

BOYD'S PHARMACY, LTD. (P.C.).—Capital £300. Objects: To carry on the business of chemists, druggists, manufacturers of and dealers in photographic materials, opticians, artists coloumen, stationers, patent medicine proprietors and vendors, tobacconists, etc. The first directors are: S. and Mrs. Katie Bogdanor. R.O.: 41 Park Road, Leyton, London, E.10.

British Synthetics, Ltd. (P.C.).—Capital £7,000. Objects: To adopt an agreement with the United Water Softeners, Ltd., S. H. Menzies and E. B. Higgins, and to carry on the business of chemical dye manufacturers as formerly carried on by the said company at Brentford and that of manufacturers of synthetic products, etc. The directors are: S. H. Menzies and E. B. Higgins. R.O.: Imperial House, Kingsway, London, W.C.2.

Wellcome Foundation, Ltd. (P.C.). — Capital £1,000,000. Objects: To adopt an agreement with H. S. Wellcome and to carry on the business of chemical manufacturers, merchants, brokers and dealers, importers and exporters of general merchandise, wholesale and retail chemists and druggists, manufacturing, alkaloidal, synthetic, analytical, bacteriological, pharmaceutical, photographic, experimental and research chemists, manufacturers and distributors of serums, vaccines, tuberculins and biological products, research workers, for the production of remedies for diseases of mankind and animals, druggists' sundriesmen, and as formerly carried on by the said vendor at Snow Hill Buildings, E.C., and elsewhere. The directors are: H. S. Wellcome, 6 Gloucester Gate, Regent's Park, N.W.1, manufacturing chemists (permanent chairman and governing director); G. E. Pearson, Embassy Hotel, Bayswater Hill, W., chemists (deputy governing director). R.O.: 67 Holborn Viaduct, London, E.C.1.

Lewis & Peat, Ltd.—The profit for the year 1922 was £24,398, subject to corporation tax. The directors state that the improvement which set in during the latter part of 1922 was continued during 1923, resulting in considerably increased turnover, both in London and Singapore, and they therefore anticipate that accounts for 1923 will show much better results.

and they interested anticipate that accounts for 1923 with show much better results.

G. B. Kent & Sons, Ltd.—The profit for the year ended September 30, 1923, after allowing for bad and doubtful debts, depreciation, etc., was £10,112, to which have to be added the balance brought forward, £782. Interest on mortgages, loans and E.P.D., directors' fees and interim dividend on the preference shares have been raid, leaving £5,800. The report states: Trade has been very difficult, owing to the unrestricted competition from countries with depreciated currencies, but the profit was gained more in the latter than in the first half of the year, so there is hope that it may continue in the current year. The board have paid the usual half-yearly dividend on the preference shares, and after paying the life directors' fees, absorbing £4,931, they recommend that £869 be carried forward.

Festivities

Portsmouth New Year Party

Under the management of the Ladies' Committee of the Portsmouth Pharmacists' Association, a happy party, engaged in games and dancing, welcomed the New Year, on December 31. Fancy dress was worn, and the hall being liberally decorated the effect was somewhat dazzling. Prizes were awarded for novelty of costumes, and as the company numbered a hundred or more the task of the judges was a difficult one. Mrs. Gall secured the first with her jar of ointment (ung. gallæ), the second prize being won by Mrs. W. R. Atterbury, "Bridge." Gentlemen's prizes went to Master Jeans, "No Bananas"; and Mr. Thorne, "Pierrot." Festivity ended about 1 a.m.

Liverpool Juvenile Party

THE new Year juvenile annual promoted by the Liverpool Chemists' Association, was held on January 2, at the "Yamen," where everything, the buffet, the dancing, the music and the Christmas-tree went merrily. Mr. and Mrs. A. W. Ashcroft held an inaugural reception, and Exther Christmes held another this genial passenger. Mrs. A. W. Ashcroft held an inaugural reception, and Father Christmas held another, this genial personage being represented (in the unavoidable absence of Mr. Lloyd, of Garston) by Mr. John Jones, of the dockside. Mr. and Mrs. J. L. Hirst, Mr. Hughes (hon. treasurer), and many other members, past and present, of the conncil, assisted indefatigably. Mr. E. Kessler exhibited legerdemain. Maw, Son & Sons, Ltd., provided the paper caps and other Christmas accessories which delight children. children.

Gibbs' Staff Dinner

THE directors of D. & W. Gibbs, Ltd., entertained their staff to a dinner and concert at the Abercorn Rooms on Pecember 28, when Mr. Kenneth Y. Gibbs (senior director) presided. Mr. W. R. Collins proposed the health of the staff, and Mr. Fairfield, secretary, was then called upon to reply. Mr. W. T. Webb proposed the health of the directors, thanking them for their hospitality that even-ing. Mr. Gerard Y. Gibbs, responding, said the directors had a sincere regard for their people, and although perhaps it was not glaringly apparent, they were always in favour of encouraging any idea that had in view the staff's welfare and comfort. His father (the chairman) had served with the firm for 50 years, and he hoped that he (the chairman) would find time to recall a few reminiscences of those early days. At this juncture Mr. Kenneth Gibbs was presented with a handsome silver tea and coffee set at a recognition of his 50 years' service to the House of Gibbs. Mr. Kenneth Gibbs, who was received with musical honours, in reply, thanked those present for their expression of goodwill towards his wife and himself. Miss Muriel Macgregor was in charge of the musical programme, which was much appreciated.

Hodgkinson's Staff Dinner

THE annual staff dinner of Thomas Hodgkinson, Prestons & King, manufacturing chemists, was held at the Three Nuns Hotel, Aldgate, London, E., on January 9. Mr. H. C. Preston presided over a company numbering about sixty. Following the loyal toast, the chairman, in proposing "The Staff," mentioned that though he had been with the firm for thirty years he saw many present who kad preceded him. After referring to the friendly feeling which existed, he spoke of the progress that had been made of recent years, as instanced by the use of motor instead of horse transport. They were doing all that was possible to increase the efficiency of the firm. Mr. Sturrock replied. Lieutenant-Colonel Preston expressed the regret of all at the loss of Mr. Brand, and paid tribute to the way in which he had served the firm from the time he joined them, forty-seven years ago. Mr. Brand had commenced as junior warehouseman, and soon became senior warehouseman, a position he held until his retirement on December 31, 1923. Colonel Preston hoped Mr. Brand would be spared for many years to come and that his health would improve. It was his great pleasure, on behalf of the staff, to present him with a gold watch, suitably inscribed. Mr. Brand, in reply, said he had always tried to do his duty and had found that his endeavours had been appreciated by the firm. He concluded by

expressing his gratitude to his fellow-workers. Mr. W. H. Bailey, in giving the toast of "The Firm," pointed out that the welfare of the staff was bound up with that of their employers. Mr. Beardsley responded. He showed that they were all, principals and men, part of a huge machine. He believed that the staff now realised that the heads take an interest in everyone of them, and that they had friends in the partners. "The Representatives" was proposed by the chairman and replied to by Mr. Saunders. The speeches were interspersed by a variety programme, which was thoroughly appreciated.

Chemists' Windows

Photographs of windows sent to the Editor for reproduction should be accompanied by a note on how the displays were arranged.

Sloan's Window-dressing Competition

WE are informed by Fassett & Johnson, Ltd., Clerkenwell Road, London, E.C., that seventy-two prizes were awarded, ranging from £20 to £1, in their recent windowawarded, ranging from £20 to £1, in their recent window-diessing competition. All the displays submitted were of a high standard. The following are the first six prize-winners: (1) Young & Harrison, South Tottenham, London, N.15 (£20); (2) E. G. Elbourne, Lindley, Huddersfield (£10); (3) James Cook, St. Stephen Street, Norwich (£5); and £4 prizes to: W. H. Harrison, Hindley; T. Llewelyn, Cardigan; Philip G. Eley, Shirley Road, Southampton.

A Christmas Photographic Window

WE reproduce a topical window sent us by Walker & Harris, Ltd., chemists, Sun Street, Canterbury. Standing by a bed in a small bedroom is the figure of a child in pyjamas holding a camera. The camera is pointed the fireplace (made realistic with red fabric and



electric light), and it is evident that the youngster is waiting to "snap" Santa Claus, whose head is seen banding to shap Santa Claus, whose head is seen outside a lattice window in the background. A stocking hanging from the mantelpiece is another detail of a striking display, every detail of which has obviously been carefully thought out. A camera was offered for the best photograph of the window taken by a customer of Messrs. Walker & Harris—a stroke of enterprise that may well have increased the shopping population of Canterbury.

Panel Practice Inquiry

The Court of Inquiry appointed by the Minister of Health to report what should be the amount of the Health to report what should be the amount of the capitation fee to medical practitioners under the National Insurance (Health) Acts (C. & D., December 22, 1923, p. 849) sat at the Ministry of Health for the purpose of taking evidence on January 4, 7 and 8. The proceedings were open to the public, and have been reported at some length in the daily Press. The public were represented at the sittings by a small number of well-groomed people of the sittings by a small number of well-groomed people of professional aspect.

GOVERNMENT FIGURES

The Government statement, comprising about 15,000 words, is divided into two parts. Part I consists of a précis of the methods of administering medical benefit and calculating doctors' remuneration, together with a summary of differences between the regulations for the years 1920-23 and those that came into force on January-1, 1924. The thirteenth paragraph is of general interest for its restatement of the separation of the pharmaceutical service from the medical :-

service from the medical:—
With regard to the supply of drugs and medical and surgical appliances, the principle underlying the Acts is that the medical should be separated from the pharmaceutical services, and that drugs and appliances should, in general, be supplied by the chemists. In two cases only do the Regulations provide for drugs and appliances being supplied by the doctors themselves.

supplied by the doctors themselves Part II is headed, "Basis of Determining Remuneration of Insurance Practitioners." The question is approached in the two following ways (we quote from the memorandum) :-

(1) By examining the rates previously paid and consider; ing to what extent they require to be adjusted in the light of relevant changes in the conditions of service and in the

cost of living:

(2) By estimating the amount of work involved, and the proportion of the practitioners' time required for its performance, with a view to calculating the whole-time equivalent of the rate offered, and by comparing this with current rates for whole-time appointments.

After paragraphs devoted to the pre-war rate, the award of 1920, the rate of 1922, and "other relevant ' the memorandum goes on to seek a foundation for calculation in Civil Service salaries. Without attempting to follow, step by step, the successive arguments advanced in this, perhaps the most closely reasoned, part of the memorandum, we give the conclusions reached:

advanced in this, perhaps the most closely reasoned, part of the memorandum, we give the conclusions reached:

Since September 1, 1923, when the last adjustment of the war bonus took effect, the basic salary of £1.177 has produced a total remuneration of £1.411. If the 11s, capitation rate is reduced in the ratio of £1.800 to £1.411 the result is a figure of 8s, 7½d. It might perhaps be considered that the more appropriate starting point is not 11s, in 1920 but 9s, 6d, in 1922. If an 11s, rate leads to an income of £1,800 per annum, the corresponding income on the basis of the 9s, 6d, rate is £1,555. This income was produced in January, 1922, by a basic Civil Service salary of £1,156. This basic salary now produces an income of £1,386. If a capitation rate of 9s, 6d, is reduced in the ratio of £1,555 to £1,386 the result is a figure of 8s, 5½d.

An alternative method of calculation is to take the prewar figure and adjust upwards. Taking 7s, 3d, as the average pre-war figure, and assuming that the reasonable whole-time income of a general practitioner before the war was somewhere about £1,200, the war bonus on the Civil Service basis would be an addition of about 18½ per cent, and on this basis the 7s, 3d, would become 8s, 7d. But if, for the reasons indicated in paragraph 3, the pre-war rate is taken as 7s., the corresponding figure is reduced to 8s, 5½d.

The capitation figure is then worked out on a time.

8s. 33d.

The capitation figure is then worked out on a time basis as suggested in the second of the two paragraphs numbered above, with a similar result. Finally, a comnumbered above, with a similar result. Finally, a comparison is made between Insurance work, private work and salaried work in respect of the income derived from each: it is stated, inter alia, that the average salary "on appointment" of forty-six medical officers of health nominated in 1920 was £738.1; that of thirty-three selected in 1921, £771.8; and that of eighteen appointed in 1922, £792. The period to which the award is to apply must also, adds the memorandum, be taken into account.

The chief witnesses for the Ministry were Mr. Smith Whitaker (a medical officer on the staff), Drs. Neilson and Richmond (regional medical officers), Mr. Brock (an Assistant Secretary), and Mr. John Jeffrey, Secretary to the Scottish Board of Health. Dr. Neilson, in reply to a suggestion that his panel work had been so rapidly performed as to gain for him the nickname of "the Scottish express," said that the epithet was coined by a hospital nurse. Dr. Richmond gave evidence based on which the state of the 1000 to 101s etc. medical practice in Bermondsey from 1900 to 1915, which included two years of panel work. His panel consisted of between 7,000 and 8,000, and he had five partners. His surgery hours were from 10 to 12 and from 6.30 to 9.30. Ten to twelve patients would attend in the morning and about 70 in the surgery hours. ing, and about 30 in the evening.

BRITISH MEDICAL ASSOCIATION FIGURES

The statement of the British Medical Association's special committee, with appendices by Sir Clifford Allbutt, Professor A. L. Bowley, and others, occupies approximately the same space as the Government memorandum. Sir Clifford Allbutt's contribution to the discussion of sir Chifford Albutt's contribution to the discussion of the situation is a reminder of the rising standard in respect of an average general practitioner's knowledge; Professor Bowley, on whose conclusions great reliance has been placed by the committee, examines the household budget of a typical practitioner. The following extracts from the committee's statement give a general idea of the register taken up by the Association. the position taken up by the Association:

The Committee now submits a supplementary memoran-The Committee now submits a supplementary memorandum... in which, using the same methods and making similar requirements, the increase of present-day cost over 1914 is put at 57 per cent.—that is, a fall of 4 per cent. on the figures of 1920. On this ground, considered by itself, therefore, the 11s. becomes 10s. 6d. Further, the expenses of carrying on insurance practice have to be taken into account. These are, mainly, wages, travelling expenses, plus one-third of rent, rates, fuel, etc. Some of these have pudowheally falls, particularly, the expenses of travelling account. These are, manny, wages, travening expenses, plus one-third of rent, rates, fuel, etc. Some of these have undoubtedly fallen, particularly the expenses of travelling. . . . It is submitted that a not unreasonable estimate of the fall could now be taken as from 75 per cent, increase to 50 per cent. increase; that is, that the expenses of practice may have decreased by 14 per cent, since 1920. The relation of these expenses to gross receipts has usually been agreed at approximately 25 per cent., but in the 1920 nemorandum certain figures lead Professor Bowley to say, "On this basis the expenses of panel practice were 16 per cent, of gross receipts from the practice."

Combining these figures, we find that of each £100 earned in 1914, £16 would be required for the expenses of practice and the net income would be £84. For the corresponding circumstances in 1923 these figures would be increased by £8 (50 per cent.) and £48 (57 per cent.) respectively—that is, a total increase of £56 on the £100 (56 per cent.). The corresponding figure in 1920 was 66 per cent., and therefore the award of 11s, should now be represented by approximately 10s, 4d.

Evidence in support of the statement was given by

Evidence in support of the statement was given by Mr. H. B. Brackenbury, Mr. Alfred Cox (medical secretary of the B.M.A.), and Dr. Ward (Medical Practitioners' Union). Among witnesses representing other tioners' Union). Among witnesses representing other interests were the President and secretary of the National Association of Insurance Committees, who gave evidence regarding the questionnaire issued by the Association with a view of eliciting information on the services rendered under the Regulations on which previous evidence had been based. Both witnesses stated that the replies which had been received were generally very favourable, and coincided with their own experience. Sir Thomas Neill (chairman of the emergency committee of Approved Societies), who followed, stated that the answers to the guestionnaire had not been considered by the Insurance Com-mittees. The representatives of the insured persons had not had an opportunity of considering the points before the answers had been given. It was important that the Court should have that before them. After the evidence had been taken, Mr. M.L. Gwyer (solicitor to the Ministry of Health), Mr. Cox and Mr. Brackenbury addressed the Court. Mr. Gwyer said that for one year the decision of the Court would be binding on the Ministry. Mr. Brackenbury said that the doctors would also regard the decision of the Court as binding for 1924

The Court adjourned to January 15.

Dutch Pharmacopæia Revision

From the report published by the Dutch pharmacopæia commission, the president of which is Professor Dr. L. van Itallie, it is apparent that the forthcoming fifth edition of that work will differ materially in many respects from its predecessors, and will embody numerous impossions of an eminently practical nature. It was innovations of an eminently practical nature. It was originally intended to issue the entire draft of the new pharmacopeia, but for reasons of economy—it has already been decided to publish the new work in Dutch, in the place of Latin, as has hitherto been the case (C. & D., I, 1923, p. 292)—only when the proofs of the complete work are actually ready will a certain number of copies be available, to enable criticisms to be submitted to the Societies for the Promotion of Pharmacy and of Medicinc respectively. The present report is devoted to a summary of the more important alterations which will figure in the forthcoming edition. In the first place it has been decided to break with the system adopted in all Continental pharmacopæias of embodying in the text of each article a full description of the method of applying each distinct text. As is the case in the British Pharmacopæia, the tests for the recognition of certain substances will be grouped together in one chapter. A very impor-tant and interesting innovation is the grouping together of the various tests for purity—that is to say, the permissible amounts of certain impurities which may be present, as interpreted by the results of the prescribed tests, in official substances. In other words, the requirement—e.g., "yields no reaction for iron"—is given a standard interpretation. This is practically an extension of the feature introduced in the B.P., 1914, in the limit-tests for arsenic and lead. Five indicators are used. tests for arsenic and lead. Five indicators are used: Dimethylamidoazobenzol (dimethyl yellow), 1:1,000; dimethylamidoazobenzol carbonic acid (methyl red), 1:500; phenolphthalein, 1:100; dimethyldiamido-toluphenazine hydrochloride (neutral red), 1:1,000; and tropæoline, 1:1,000. A chapter is included defining the interpretation of certain expressions in current use in analytical work, as follows :-

NEUTRAL = a liquid which does not alter the colour of

red or blue litmus paper.

ACID, or FAINTLY ACID=a liquid which produces a distinct, or appreciably, red colour with blue litmus

paper $(P_H < 3)$.

ALKALINE, or FAINTLY ALKALINE = a liquid which produces a distinct, or appreciable, blue colour with red litmus paper (P_H > 10).

AMPHOTERIC = a liquid which produces a violet colour with red as well as blue litmus paper (P H 5-8).

ACID TOWARDS DIMETHYL YELLOW=a liquid which assumes an orange to red coloration on the addition of 1 drop of dimethyl yellow solution to 10 c.c. (P_H 4-3).

ALKALINE TO PHENOLPHTHALEIN=a liquid which is coloured pink to red on the addition of 1 drop of phenolphthalein solution to 10 c.c. (PH 8-10).

NEUTRAL TO DIMETHYL YELLOW = a liquid which assumes the alkaline tint on the addition of I drop of dimethyl yellow solution to 10 c.c. (compared with 10 c.c. of water to which 1 drop of this indicator has been added), and which changes to red on the addition of 3 drops of N/10 hydrochloric-acid solution (P_H < 8).

NEUTRAL TO PHENOLPHTHALEIN = a liquid which remains colourless on the addition of 1 drop of phenolphthalein solution, but which assumes a pink to red colour on the addition of 1 drop of sodium-hydroxide solution ($P_H < 8$).

NEUTRAL TO METHYL RED = on the addition of 1 drop NEUTRAL TO METHYL RED=on the addition of 1 drop of methyl red solution to 10 c.c. of the liquid, it should not assume a deeper red tint than that produced in adding 1 drop of methyl red solution to 10 c.c. of a solution of boric acid (1:100), nor a yellow tint deeper than that produced on the addition of 1 drop of methyl red solution to a solution of boric acid (1:100) containing 0.1 per cent. of borax (P_H 5-6).

NEUTRAL TO TROPECLINE—on the addition of 1 drop

NEUTRAL TO TROP. COLINE = on the addition of 1 drop of tropseoline solution to 10 c.c. of the liquid, the

colour should not differ from that of 10 c.c. of water to which 1 drop of this indicator has been added (PH > 3). A few examples will serve to illustrate the tests and

reactions for certain frequently occurring substances:—.

CHLORIDES.—The substance, to which, if necessary, dilute sulphuric acid is added, evolves chlorine on heating with potassium permanganate crystals. A dilute aqueous solution of the substance yields a white curdy precipitate on the addition of silver nitrate solution, which is insoluble in nitric acid, but soluble in solution of

ammonia or of ammonium carbonate. MERCURY.-An aqueous solution of the substance, if necessary, prepared with the aid of dilute hydrochloric acid, yields on the addition of b of its volume of hypophosphite test solution after a short time a white pre-

cipitate, which on heating assumes a greyish colour.

The chapter devoted to the general tests for impurities includes a description of the methods to be adopted to determine the absence of colour and the clarity of liquids, and an interpretation of the terms "no residue on incineration," and "no residue on evaporation." The absence of colour in liquids is established by comparison with: (1) A yellow solution of 0.002 gram of potassium bichromate in 1,000 c.c., acidified by the addition of dilute sulphuric acid; (2) a pink solution containing 0,005 gram of cobalt nitrate in 1,000 c.c., acidified with of dilute hydrochloric acid; (3) a blue solution of 0.01 gram of copper sulphate in 1,000 c.c., acidified with dilute hydrochloric acid. A liquid is deemed to be colonrless if its tint is not deeper in comparison with that of the above three solutions. The tests are to be carried out with tubes of at least 10 cm, length, provided with a flat, colourless base, viewed against a white background. . (To be continued.)

Almanacs and Calendars

JAMES BURROUGH, LTD., Cale Distillery, London, S.E.11, distribute a wall calendar (113 in. by 6 in.) with a weekly tear-off portion. Figures printed in white on a grey ground give an artistic touch to the production, the general style of which is repeated in a blotter.

T. RIDLEY & Son (CHEMISTS), LTD., Carlisle, have reached the thirty-first year of publication of "Ridley's Almanac" (8½ in. by 5½ in.). This is a booklet of sixty-four pages, deftly packed with assorted reading matter, including some well-turned advertisements of Messrs. Ridley's leading lines.

LAWRENCE & SHEPHERD, chemists, Oban, circulate an almanac (7 in. by $4\frac{1}{2}$ in.) in book form, comprising a variety of local and general information. This (the twenty-ninth) year of publication has been marked by the addition of voting and word-making competitions, which will, no doubt, enhance the popularity of the almanac among its 10,000 recipients.

MANGOLD BROTHERS, chemical merchants and manufacturers, 17 Harp Lane, London, E.C.3, issue two wall calendars. One, measuring 14 in. by 10 in., comprises six leaves, each of which has as central feature a colour print exemplifying Lawson Wood's humour at its best. The other (10 in. by 9½ in.) is well adapted to office use, the figures on the monthly leaves standing out clearly.

Business Changes

Mr. Gordon Lock, chemist and druggist, has opened a business at Chantry Lane, Grimsby.

THE business of the late Mr. T. E. Riddle, Ph.C., which was carried on under the style of Bell & Riddle, chemists, Market Place, Hexham, is being continued by

WALTER WAUGH & Co., chemical merchants, Coronation House, 4 Lloyd's Avenue, London, E.C.3, inform us that they have converted this firm into a private limited company. There will be no change in the *personnel* or management of the business.

Pharmaceutical Botany

XXXIX. Aconite

Reference to our last article will reveal the position of aconite (Aconitum napellus, Linné) as a peculiar type of the Ranunculaceæ in which the flower has undergone striking modifications in its adaptation to insect pollination. The flower, in changing itself to pollination by humble bees, etc., has become zygomorphic—i.e., divisible into two counterparts (zygon=yoke, morphe=form), a high type of development commonly met with in flowers of much more advanced character. But it is the calyx that has taken on the unusual form, whereas in zygomorphic flowers the characteristic form is commonly due to the corolla (e.g., sweet peas). The calyx of the aconite flower consists of five blue petaloid sepals, the uppermost being helmet-shaped (galeate). The latter, which is quite characteristic of aconite, protects the essential



Fig. 132.—Inflorescence, Leaf, and Fruits of Acontrum Napellus. Linné.

organs from rain. This hood or cowl serves to distinguish between toxic A. napellus and inactive A. paniculata, often cultivated as a show plant, the cowl being much shallower in the former. The two lateral sepals and the two basal ones are little altered from the broadly ovate shape found in other flowers belonging to this family with petaloid calices. Of the five petals, two have been modified into hammer-shaped nectiferous organs concealed in the hooded sepal; the other three, having but little in the way of useful functions, are reduced to inconspicuous tooth-like organs. The stamens are numerous; some of the outer ones have winged filaments which are quite curious in regard to stamens (Fig. 133). The carpels are reduced to a single whorl (three to five), but are not united (apocarpous). The ovules are arranged along the inner or ventral suture. When ripe they split along their inner surface to shed their seeds, such fruits being called follicles. The embryo is embedded in oily endosperm. All these details are shown in Fig. 133. The aconite plant itself, also known as monkshood from the shape of its flower, and wolfsbane owing to

its poisonous properties, is a handsome perennial plant attaining a height of three to four feet. It is supposed to be indigenous to this country, but wild plants are escapes from cultivation. The straight smooth stem is smally undivided, bearing dark-green leaves of distinctive form (palmatisect). Deeply divided leaves usually indicate plants subjected to shade either by grass or trees. The stem is terminated in late May or early June in a raceme of handsome blue flowers. (A. napellus flowers earlier than other garden species in cultivation.) Below the stem merges into a conical tap-root, while

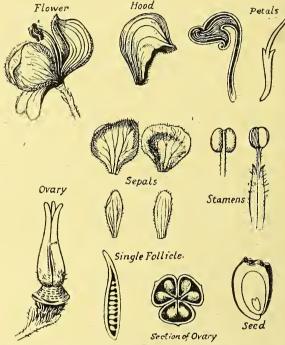


Fig. 133.—Single Flower and Separate Parts of Aconite Flower. (Redrawn from the coloured reproductions of French Medicinal Plants, edited by Jean Montaudon, 56 rue de Vaugirard, Paris.)

future propagation by vegetative means is provided by the development of one or more daughter-roots filled with starchy reserve material. The aconite root of commerce should (but rarely does) consist of the latter from plants cultivated in England. These should be dug up when growing season is over, usually at the end of September or beginning of October. The poisonous principle of aconite is an alkaloid (aconitine), and the characteristic

tingling sensation and numbness produced by licking a sliced aconite root are due to this definite chemical (acetylbenzoylaconine). Aconite in cultivation is propagated from the smaller (daughter-roots), as plants grown from seeds may be hybrids and thus vary in activity. Those who would like to grow aconite in their garden should find a shaded bed. The soil must be well dug in autumn, and broken up by winter's frosts. Digging in of rotted leaves or stable manure is



advantageous. Young roots are planted about a foot apart in December or January, and young shoots appear in February. The leaves of the plant are rarely used nowadays in medicine. All parts of the plant are poisonous, and reports have been made from time to time of fatalities through eating aconite herb or root. In some parts of India sheep are muzzled when traversing aconite zones. On the other hand, rodents have learned to leave aconite alone; even severe hunger does not tempt them to eat the succulent starchy root of aconite in its winter (resting) state. See also p. 55.

Pharmaceutical Society of Great Britain

Evening Meeting in London

An evening meeting of the Pharmaccutical Society was held at 17 Bloomsbury Square, London, W.C., on January 8, Mr. E. White in the chair. Sir William Glyn-Jones and Professor Greenish supported the chairman at the table, and among the large audience we noticed Mr. R. R. Bennett, Mr. J. O. Braithwaite, Miss Braithwaite, Mr. F. Browne, Mr. H. Deane, Mr. W. B. Falding, Mr. H. Finnemore, Mr. R. Fouracre, Mr. R. Haas, Mr. C. H. Hampshire, Mr. T. Hardy, Mr. A. H. Jenkin, Mr. E. F. Linstead, Mr. C. W. Maplethorpe, Mr. H. Martin, Mr. A. R. Melhuish, Mr. Langford Moore, Mr. C. A. Noble, Mr. John Noble, Mr. E. S. Peck, Miss Sharples, Mr. H. Skinner, Mr. G. A. Tocher, Mr. A. T. Tyler, Mr. T. E. Wallis, and Dr. Stanley White.

The CHAIRMAN, in opening the proceedings, stated that

The CHAIRMAN, in opening the proceedings, stated that owing to indisposition the President was unable to be present, and in a few words introduced the lecturer of the evening, Professor Dr. L. van Italie, who read a

paper entitled

Micro-Chemistry and Some of its Applications

[ABSTRACT]

Professor van Italie began with a graceful reference to the pleasant memories he had retained from his last



PROF. DR. VAN ITALLIE

visit to London, and then proceeded to give a re-view of the development of micro-chemistry since 1843, when von Mohl described certain reactions observed under the microscope. It is very interesting to know that an important part of the principles and methods of to-day's micro-chemistry had their origin in a Dutch text-book, "Het had their origin in a Dutch text-book, "Het Microscoop," writen by Harting, who was Professor of Zoology (1866) in the University of Utrecht, In this book he gives descriptions crystalline compounds, and also directions for the detection of small quan-

tities of some elements. Würtz begins his 'Dictionnaire de chimie pure et appliquée' with the sentence, 'La chimie est une science française,' and, the lecturer remarked, were he a Chauvinist in more than sufficient measure he could claim micro-chemistry as a Dutch science, particularly since many of the methods had been further elaborated by several of his fellow-countrymen. It is evident that by the extension of the methods, and the new possibilities created by them, the significance of the word micro-chemistry has gradually changed, and this evening he proposed to construe it in a very liberal sense by directing attention to different methods that enable us to identify chemical elements and their compounds, or to determine the quantity in which they exist in compounds and in natural products. Of course, it is always minute quantities we have to deal with in micro-chemistry. The identification of traces can be performed in different ways, depending on the nature of the material. The smell of musk is perceptible in so small a quantity that it is the example usually cited to prove the minute divisibility of matter, because musk can communicate its smell during many years to a room, without the loss of weight in the musk being perceptible by the balance. Zwaardemaker has proved with his olfactometer that the quantity of some chemical compounds perceptible by their odour is so small that there is perhaps no better means to detect them than by making use of our sense of smell. The sense of taste

is much less developed than that of smell; but the colour and the other optical properties offer great advantages. We know that some substances have a distinctive colouring effect, and that the kind of colour can be determined by the spectroscope. The use of this instru-ment enables us also to detect very small quantities of elements, and in connection with the microscope to identify, for instance, the nature of some derivatives of blood even when they are present in very small quantities. Micro-chemistry gives us a series of methods to accomplish reactions with very small amounts of substance, in a minimum of time, and with so great a degree of accuracy that failure is impossible. The amount of substance can be reduced in many to a hundredth or even a thousandth part of a milligram; the reaction takes place in a small drop of the solvent; the reagents are brought into the solution in the solid state to prevent dilution of the mixture; the product of the reaction has always to be readily recognisable, and so characteristic that it cannot be confused with other products. In most cases we have to deal with crystals, which by their form or their colour and by the condition in which they are obtained give proof of the identity of the substance,

DELICATE REACTIONS

In other cases-alkaloids, for example-we have to call in the aid of the optical properties of the crystals, such as their behaviour between the crossed nicols of the polarisation-microscope, the indices of refraction, etc. It is not always necessary to have the substance under examination in a pure state. Many reactions are not hindered by the presence of other substances; if they are, we have to make use of different methods for isolating the various constituents and to perform the reactions on the isolated parts of the mixture. To effect isolation we take advantage of all the processes used in micro-chemical examination; solution in different kinds of solvents, sublimation, distillation, precipitation, etc. But all the manipulations are carried out with small quantities of the substance, and in apparatus of dimensions adapted to these quantities. Its application in qualitative analysis has so many advantages that his Its application in students frequently prefer micro-chemical analysis to macro-chemical, and that in case of uncertainty the microscopical method always gives the conclusion wished for. Another advantage of micro-chemical analysis is that it takes little space, and that for the qualitative analysis a laboratory in a nutshell will suffice. A microscope, fitted with a polarisation-apparatus, a small box with reagents, a platinum wire, some glass rods and slides, and a micro-burner are all that is needed. Professor van Italie thereupon proceeded to show a number of reactions on the screen, reminding his hearers that many chemical substances are characterised by the form of their crystals, but that this is not always sufficient. Ice and iodoform have the same crystalline form; they are isomorphous. They differ, however, in colour and smell, and by the conditions under which they are produced. So the form of potassium platino-chloride is identical with that of the corresponding compound of ammonium. Both are produced by bringing a drop of platinum chloride solution into a drop of a solution of a potassium or ammonium salt. (The formation of these crystals was shown on the screen.) Dealing with some applications of micro-chemical methods for research work, the lecturer stated that since the time of Rumphius it has been known that in the isle of Amboina, in the Dutch Indies, there has existed a tree the bark and leaves of which can be used as a mordant to fix colours on fibres. The tree has been recognised as a species of Symplocos, and the very delicate test for aluminium by the formation of crystals of cæsium alum made the localisation of the aluminium in the plant possible. If we wish to prove the presence of ferulic acid in asafetida it is sufficient to heat a splinter of the gum-resin on a slide, and to condense the sublimation products on a second slide. Even by using not more than 50 milligrams, a very fine and characteristic sublimate of ferulic acid can be obtained. To differen-

tiate between Sumatra and Siam benzoin the Pharmacoposia of the United States describes a sublimation test. The Sumatra resin, containing ciunamic acid, forms a sublimate consisting of plates and small, rod-like crystals that strongly polarise light; Siam benzoin, containing benzoic acid, gives, under the same conditions, long rod-shaped crystals, which do not strongly polarise light. The test is practicable with a splinter on a slide. In the last few years wormseed that lacks a sufficient amount of santonin is being put on the market. Good powder of the flower-heads of Artemisia Cina gives on sublimation, even when using not more than 10 or 20 milligrams, a sublimate of santonin in very fine crystals. By this method Professor van Itallie succeeded in detecting santonin in the leaves of Artemisia brevifolia, in which Professor Greenish had proved the presence of this valuable principle for the first time. For the identification able principle for the first time. For the identification of poisons by means of the microscope, English literature possesses a very valuable work in Wormley's "Microchemistry of Poisons" (second edition, 1885), giving micro-chemical tests for a great number of poisons; in 1921 there appeared a text-book of Stephenson on some micro-chemical tests for alkaloids. But besides the substances dealt with in these works, the application of microchemistry to foreign about the substances are several weak. cation of micro-chemistry to forensic research work is unlimited. In this connection the lecturer described some cases which had come within his own experience, among which the following: A man stood under suspicion of having poisoned his wife. The police brought all the bottles they could find in the house of the suspected Some bottles contained a sufficient quantity of fluid; others were apparently empty. He had the good luck to observe in the water with which he rinsed out one of the empty bottles a slight fluorescence remembling that of eosin. Solutions of corrosive sublimate are often coloured with this substance, and that suggested the possibility of the presence of corrosive sublimate. One drop of the fluid was sufficient to produce in a few minutes the fine blue crystals of cobalto-mercuric sulpho-cyanate. It is evident that this science can be applied cyanate. It is evident that this science can be applied in the examination of chemical compounds for pharmaceutical purposes, and Professor van Itallie referred to the recently published text-book by Mayrhofer, entitled "Mikrochemie der Arzneimittel und Gifte" (see C. & D., January 5, p. 23), which contains a detailed description of methods for use in the examination of chemical drugs. In a draft for a Dutch homeopathic Pharmacopæia, micro-chemistry is used in several cases to prove the presence of the active principle in the homœopathic dilutions. Also, in research work in the field of the celmistry of plants, micro-chemistry has enabled us to enlarge our knowledge.

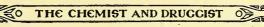
BRILLIANT RESULTS

Professor van Itallie now proceeded to deal with some investigations carried out in his own laboratory, which demonstrate that by micro-chemical methods problems can be solved more easily and with less material than by ordinary methods. During the analysis of a plant and the investigation of its chemical constituents we often isolate small quantities of plant acids, generally mixed with colouring matter and impurities, so that the melting-point cannot be determined or an elementary analysis made. Purification of the isolated substance is often impossible; the risk of losing all the material is great. The configuration of the most common organic acids and their salts is described with illustrations in the text-books. But from time to time we meet with acid substances, which cannot be identified with those of which the microscopical appearance has been described, and then the determination of their identity is very troublesome. So Dr. Steenhauer and himself found themselves during the investigation of Tiliacora acuminata in the presence of an acid that at first they could not identify. Dr. Steenhauer made the suggestion that it might be fumaric acid. In the absence of reactions suitable to detect the acid even in the presence of impurities Professor van Itallie tried to find some microchemical reactions, and had the good fortune to observe in the lead and the copper salts fine crystalline compounds, which enabled them to identify the compound as

plant (Nyrrhis odorata), and presumably it will be found in many other plants. In 1910, one of the lecturer's students, Dr. Kerbosch, at present director of the Government cinchona plantation in the Dutch Indies, investigated the formation and distribution of the alkaloids in Papaver somniferum in the several stages of the development of the plant by micro-chemical methods. (Crystals of narcotine, morphine, etc., were projected on the screen to show the results which can be obtained from the application of micro-chemistry in investigations on alkaloids.) The success of these investigations is apparent from some of the conclusions quoted from the work of Dr. Kerbosch. In the seed of Papaver somniferum there exists only a trace of narcotine and some amorphous alkaloid. After three days' germination narcotine has been formed in the seed in considerable quantity. The alkaloids appear in the plant in the following succession: Narcotine, codeine, morphine, papaverine, narceine, and thebaine. The flowering plant contains in all its organs, apart from the stamens, the same alkaloids, with the exception of narceine and thebaine; the papaverine disappears after the flowering period. This is the first time that so complete a picture has been given of the development of such important alkaloids as those of Papaver, and we have to thank micro-chemistry for giving us the expedient to reach such a result. Later, Professor van Itallie published, with Miss van Toorenburg, an account of the micro-chemistry of other opium alkaloids, such as protopine, tritopine, laudanine, etc., and investigations on the development of the principal alkaloids in the variety of Papaver somniferum with black seeds. The experiments were carried out on a large scale; at one time they had more than 10,000 plants at their disposal, and were able to prove that the opium of this variety is lacking in narcotine.

MICRO-CHEMICAL QUANTITATIVE ANALYSIS

Very often, especially during research work, we have to carry out quantitative estimations with very small quantities of material, and here again it is microchemistry that enables us to bring our investigations to a successful conclusion by giving us methods which rival, and in some points excel, those of macro-analysis. After describing the types of micro-balances used in this work, enabling the determination of 1/1,000 of a milligram, whereby with less than 10 milligrams an elementary analysis of carbon compounds can be done with an accuracy which leaves nothing to be desired, the lecturer accuracy which leaves nothing to be desired, the fecturer stated that he often has to determine quantities of arsenic varying from less than 1/1000 to half a milligram. In cases in which the quantity exceeds 5/1000 milligram he always determines it by weight or by titration. The mirror is produced in a nearly capillary tube; the part with the mirror is cut out of the tube as short as possible, and weighed on the micro-balance. By heating in a flame the assenic is driven out of the tube part. The loss in weight is the quantity of arsenic to be estimated. In titrating we need burettes divided into 1/50 or 1/100 of a cubic centimetre, and we often use test-solutions of great dilution, as for the estima-tion of arsenic in urine, in the hair, in wall papers, etc. Professor van Itallie mentioned the control of insulin treatment in cases of diabetes, where the estimation of the blood-sugar is done by semi-microchemical methods. Finally, in proof of the excellence of the methods we are speaking of, he said that lately an extensive investiare speaking of, he said that hat the said that hat a gradient on hyoscyamus had been carried out in his laboratory. The amount of alkaloids in this drug is very low, so low that, in his opinion, if Shakespeare had lived in these days he would have chosen some other than the said which the said that the said which the said that the said which the sa plant than that with which Hamlet's father was supposed to have been poisoned. One of his old pupils, who is also a good botanist, has undertaken the task of investigating the development of the alkaloid during the growth of the plant, and of determining its amount in the different parts. He is also making genetic researches to find types with a maximum of alkaloid. The very interesting facts obtained by applying the genetic rules of



Mendel and of Johannsen will be published next year. At this moment he could only say that the experiments required micro-chemical work, and that hundreds of assays have been performed with such a degree of exactness that in the same sample the difference between two assays did not exceed more than a few thousandths of one per cent., and even less. In conclusion, Professor van Itallie expressed the hope that his brief exposition of the advantages of micro-chemistry might be a stimulus for many to make acquaintance with this fascinating method of analysis.

DISCUSSION

The CHAIRMAN, in opening the discussion, said that if Professor van Itallie was looking for compliments, he could have them, since he was sure that all had listened with the greatest pleasure to his interesting paper. He referred jocularly to the large economies in the use of chemicals which would be effected in laboratories adopting this method of analysis.

Mr. V. COFMAN referred to the beautiful colours shown by crystals in polarised light, and to the application of

micro-chemistry in petrography.

Professor Greenish said he could not allow the opportunity to go by of saying how much he had enjoyed the admirable lecture. At the Conference, in conversa-tion with Professor van Itallie, he had expressed himself sceptically as to the possibility of carrying out analyses with extremely small quantities of substance. Professor with extremely small quantities of substance. Professor van Italie replied that if he would come to Leyden, he would not only see how it was done, but would be made to do it. He went over, particularly since he thought that micro-chemistry might solve a problem encountered in the course of investigations he was engaged upon, and became a student again for a few days. He described how satisfactory had been the results of the first analyses he had carried out independently at the close of his course of instruction. independently at the close of his course of instruction. He had gone to Leyden a sceptic, but now he was persuaded that the method was quite feasible. It had been a great pleasure to him to have induced Professor van Itallie to come to London to deliver the lecture they had just heard. Micro-chemical analysis is very fascinating, and as Professor van Itallie once said to him, it was like an excursion into fairyland. Professor Greenish concluded by expressing the hope that they would again have the pleasure of hearing Professor van Itallie.

Mr. C. E. CORFIELD referred to the question of the

determination of minute quantities of arsenic, and to the difficulties experienced in identifying small amounts of cocaine, where the ordinary chemical tests are unsatisfactory. He asked whether the zinc content in sea water, which was responsible for the high death rate in oysters, could be determined by micro-chemical analysis. He expressed the view that not sufficient use of these tests had been made in the British Pharmacopæia, and he suggested that the attention of the authors of that work should be

drawn to this method.

Professor VAN ITALLIE, in replying to the said that for the estimation of arsenic he generally adopted the method of titrating with solution of iodine; for very small amounts he preferred that of sublimating the arsenic from the tube. In his opinion, the permanganate test for cocaine is a very sensitive one; however, we have no micro-chemical methods for the estimation of very small amounts of alkaloids. He had himself carried out investigations demonstrating the presence of zinc in vegetable and in the human organism, and by micro-chemical methods had succeeded in establishing the amounts present.

Mr. A. R. Melhuish, in proposing a vote of thanks to the lecturer of the evening, said that those who had met Professor van Italie at the Conference knew that they would have a delightful evening. However, he did not believe that the proposals to adopt the new method would materialise for some time; certainly micro-chemistry efforded an excellent form of professor that they have a study. He afforded an excellent form of post-graduate study. He trusted that they would have the pleasure of hearing Pro-

fessor van Itallië on many occasions.

Mr. E. SAVILLE PECK, who seconded the vote, felt sure that the lecture would go down in the annals of the

Society as one of the finest held in the building, and paid tribute to Professor van Itallie's charming personality and profound knowledge. He referred to the expert and profound knowledge. knowledge required to distinguish the various crystals, and in reply to his inquiry as to the time required to master this task,
Professor VAN ITALLIE replied that the students who

came to his laboratory to undergo a six months' course in micro-chemistry had already passed an examination in

which one of the subjects was crystallography.

On the motion of the Chairman, a cordial vote of thanks was awarded to the lecturer.

Qualifying Examination Results

The following are the results of the Pharmaceutical Society's Qualifying examination, held in London this

		PART I			PART II		
	No.	Absent	Referred	Passed	Absent	Referred	Passed
Entered for whole Examination Entered for Part II and referred sub-	46	9	4	11	5	_	2
ject in Part I Entered for Part I	36	3	11	22	3	2	5
only	67	2	13	21	_	-	-
Part I only Entered for Part II	24	- 1	8	16	_	_	-
only Referred subject in	132	-	-	-	5	37	33
Part II	91	-	_		- 3	23	65
	396	14	36	70	16	62	105

Referred in one subject: Botany, 14; chemistry, 19; physics, 3; materia medica, 12; pharmacy, 45; poison law, 5; total, 98.

Parts I and II

The following, having satisfied the examiners in Parts I and II, have been registered as chemists and druggists :-

Bastide, R. S., Halifax Boshell, Margaret M. B., Reading Elizabeth Ogilvie, М., Islington

Morris, L., Nottingham Pelling, A. E., Glynde Roden, W. H., Sparkhill Smith, Marjorie, West Kirby

PART II

The following, having satisfied the examiners in Part II, have been registered as chemists and druggists:

Algar, E. W., Hampstead Atkinson, J. P., Birmingham Bailey, A., Burnley Bailey, Eric, Melton Mow bray Bailey, R. G., Nantwich Bayley, Joan M., Castletown Phyllis Bouckley, Maidstone Bradburn, A. G., Milton Brown, S., Hammersmith Browne, P. E., Bootle Browning, E. A., Balham Canham, Phyllis H., Ipswich Chapman, Marjorie M., Finchley ohen, E. M., Merthyr Cohen, Tydvil Cooper, G. J., Balham Courtenay, C. E., John's Wood

Curtis, L. C., Folkestone Davies, A. L., Carmarthen Davies, Edith, Aberystwyth Davies, E. M., Colwyn Bay Davies, R. Bolton
Dewey, Norman, Hull
Dickinson, G. E. Highgate
Diss, R. G., Barrow-in-Furness Dyson, Jack, Manchester Edwards, H., Aberystwyth Englesen, C. A., Kilburn Fox, L. H., Darlington Golding, H. R., Bristol Griffiths, L. L., Pontypridd Hardy, H., King's Norton Hargreaves, F., Accrington Harker, W. J., Liverpool Harris, W. H., Birming-Haywood, S., Wimbledon Heath

Hepworth, J. C., Newton Hitchcock, L., Carrington

Hoyles, C. S., Leicester Hull, A. E. S., Catford Hurcomb, L. W., Birmingham Hutchings, Martha M., Whitchurch Johnstone, H., Bradford Jones, E. G., Dyserth Jones, G. B. M. Emma, Handsworth Lander, C. H.; Derby Langdon, E. E., Exeter Lloyd, Thomas, Rhayader Henry, Lovett. Stoke Newington McIvor, A. A., Evemouth Meredith, R. E. M., Kensal Rise Mills, C. W., Petersfie'd Nicholas, W. C., Cardiff Oates, H. B., Helston Osborn, Jane, Bootle Owen, H. C., Burton-on-Trent Owen, John, Manchester Owen, O. W., Carnaryon Passingham, H. G., Newton Abbot Pendray, Finchlev Plattin,- H. H., Chelmsford Pratt, A. G., Kettering Pratt, W. T., Kilburn Pratten, P. R., Bedminster Roberts, Elizabeth, Abergavenny Roberts, Nancie, Abergavenny

Rowlands, E. P., Bangor Runham, H. A., Tooting Rusling, C. W., Bridgnorth Salter, W. A., Abram

Scampton, V. J. Bournemouth Shirley, G. Mary, Leicester Sidebottom, A. R., Blackpool Sivertsen, W. S., Claremont. Spyvee, R., Sleaford Stanyon, H., Ketton Taylor, E. V., Ashbourne Thirsk, A. W. B., Hull Trembath, D'Arcy B.,
Barnstaple
Trussler, F. A., Southampton Turner, Jesse, Haywards Heath Turner, Tom, Stockport Tyldesley, A., Leicester Tyrrill, H. G., High Wycombe Vyse, H. C., Gorton Wagstaffe, N. W., Southport Walker, E. May, London Wallace, J., Carlisle Warwick, G. W. Caversham Wellings, P., Macclesfield Wennerstrom, V. J., Margate. Westerman, H. B., Cape Whitehall, G., Edgeley Wilkins, Clara L., Kensing.

Williams, H. B., Newport Williams, H. D., Corwen Wills, F., Nottingham Wilson, J. E., Darlington Windley, L., Ilkeston

Branch Meetings

Salford.—The monthly meeting of the Salford Pharmaceutical Association was held at 40 The Crescent recently. The President (Mr. C. Brown, Ph.C.) occupied the chair, and introduced Mr. W. J. Melhuish, D.Sc., who gave a lecture on The Chemistry of Food. After explaining the origin of this series of lectures, the speaker traced the elements of food from the soil to plants and to humanity either directly or indirectly through animal products. The division of food into three varieties and the proportions normally required was next explained. Numerous hints were given which should be helpful to chemists when explaining the value of various foods to their customers. Mr. Franklin proposed a vote of thanks to Dr. Melhuish for his delightful lecture.

York.—At a meeting of the York Chemists' Association, held recently, Mr. A. W. Lupton, Ph.C., gave a paper on The New Codex. The President (Mr. W. P. Saville) introduced Mr. Lupton as an old friend of the association. Mr. Lupton spoke of the value to pharmacists and dectors of the Codex, and pointed out the need of a standard book which included preparations not in the Pharmacopæia. He outlined the new monographs, including those on acriflavine, allium, salvarsan, colloidal substances, and radium. He spoke also on the remaining formulary, mentioning how necessary it had become to have a standard of colour; as, for instance, no two batches of inf. gent. co. conc. or oxymel scillæ bought from two different leading wholesale chemists are the same in colour, although they are the same medicinally. In conclusion, Mr. Lupton showed about twenty preparations, including the combinations with liquid extract of malt.

LUMINOUS PRINT.—A French patent has been taken out for luminous printers' ink for printing on paper, etc.

Personalities

COUNCILLOR ALBAN ATKIN, M.P.S., West End Lane, London, N.W., has been re-elected to several committees and subcommittees of the Hampstead Borough Council.

Miss Marjorie E. Baxter, second daughter of the late Mr. W. S. Baxter, chemist and optician, Town Street, Bramley. Leeds, has obtained the degree M.B., Ch.B., of Leeds University.

Owing to indifferent health, Mr. John W. Davison has resigned his position as London representative of Jules Denoual & Co., manufacturing chemists, Peckham, S.E., after twenty-three years' service. Mr. Davison asks us to express his thanks to the many friends who have given him their support during some or all of those years.

The following employees of A. & F. Pears, Ltd., Isleworth, were presented with gold watches on their retirement recently: Mr. H. Hart, who had completed forty-two years' service; Mr. T. Treadway, forty years' service; and Mr. F. Burt, thirty-eight years. The presentations were made by the secretary of the company, Mr. P. M. Sanderson, and the three recipients returned thanks. A dramatic entertainment provided by Mr. H. Little and his "Strolling Players," assisted by the Leyland orchestra, was much appreciated by a large gathering of the company's employees.

The lecture to be given by Mr. E. W. Morris, C.B.E., house governor of the London Hospital, Mile End Road, E. at 17 Bloomsbury Square, on January 16, derives additional interest from the fact that Mr. Morris is a pharmaceutical chemist (although his name does not appear on the Register), and was successively on the dispensary staffs of St. Thomas's Hospital and the "London," eventually exchanging the post of chief pharmacist at the latter for that of secretary of the institution. Mr. Morris's subject, "The Future of Voluntary and Municipal Hospitals," is one on which he is an acknowledged authority. Dr. H. L. Eason, superintendent of Guy's Hospital, will preside.

SIR WYNDHAM ROWLAND DUNSTAN, F.R.S., M.A., LL.D., whose retirement from the directorship of the

Imperial Institute was announced in our issue of December 1, has been appointed a Knight Commander of the Order of St. Michael and St. George by his Majesty the King. Sir Wyndham Dunstan, who is the eldest son of the late Mr. John Dunstan, Governor of Chester Castle, was born in 1861, and was born in 1861, and was educated at Bedford School. He held two appointments in the University of Oxford prior to taking up the professorship of chemistry at the Pharmaceutical Society's School; for eight years he occupied a similar position at St. Thomas's Hospital, and eventually



Photo] [Elliott & Fry. SIR W. R. DUNSTAN

he succeeded Sir Frederick Abel at the Imperial Institute. During ten years (1893-1903) Sir Vyndham was secretary of the Chemical Society, and for the next two years he was a Vice-President. The mention of his connection with chemical science, however, gives an inadequate idea of the wide range of his activities, his advice having been sought in almost innumerable directions during the past twenty-five years, particularly on subjects related to agricultural chemistry. He has undertaken overseas travel on several occasions at the request of various governments, and has embodied his researches in official reports and in scientific publications.

Births

Notices for insertion in this column must be properly authenticated.

Thomson.—At Cross, Doune, on December 30, 1923, the wife of J. T. Thomson, chemist and druggist, of a daughter.

Marriages

JOHNSTONE—FLINDLE.—At Red Hall Church, Audenshaw, Manchester, on December 8, 1923, James Johnstone, L.D.S., eldest son of Mr. D. F. Johnstone, chemist and druggist, Melrose, to Edith, only daughter of Mr. J. Flindle, Audenshaw.

Deaths

ALEXANDER.—On December 30, 1923, Mr. William Alexander, chemist and druggist, Banff, aged seventy-



MR. W. ALEXANDER

seven. Mr. Alexander served his apprenticeship to Mr. James Bruce, Turiff, and then was an assistant with Frazer & Green, Ltd., Glasgow, for two years. He passed the Modified examination in 1869, and subsequently became manager to Mr. William Hay, Alford. In 1873 Mr. Alexander commenced business on his own account at Banff, where he built up a successful connection. The esteem in which he was held by his fellow-townsmen led to his election as Provost, an office that he filled with

distinction. Mr. Alexander was vice-chairman of the Local Executive Committee at the Aberdeen meeting of the British Pharmaceutical Conference in 1908.

Barrow.—At Cheltenham, on January 1, Mr. Edward Barrow, chemist and druggist, aged seventy-nine.

BLACKADAR.—At his residence, "The Poplars," Hartplain Avenue, Cowplain, Portsmouth, on January 6, Mr. Henry William Blackadar, retired chemist and druggist, aged seventy-two. Mr. Blackadar was in business in the Portsmouth area for many years, first at Landport and then in Ophir Road. He had been a member of the Portsmouth Town Council since 1904, and of the Board of Guardians since 1901. Although in failing health for some time past, Mr. Blackadar maintained his interest in public affairs, and was able to send New Year greetings to his colleagues on the education committee. He is survived by a widow and family. Sympathetic reference to his career was made at the meeting of the Portsmouth Town Council, on January 8, by the Mayor and by Councillor C. P. Childe, F.R.C.S., President of the British Medical Association and chairman of the committee of which Mr. Blackadar had been vice-chairman. A vote of condolence with the family was passed.

DEANS.—Recently, Mr. James Deans, Ph.C., 75 Marlborough Park South, Belfast, assistant for twenty-five years with Mr. I. W. Nicholl, Ph.C., High Street. Mr. Deans qualified in 1897.

Dowling.—At 6 Garville Avenue, Rathgar, Dublin, on January 5, Mr. Joseph Dowling, late secretary of Boileau & Boyd, Ltd., manufacturing chemists. Mr. Dowling, who was born in 1848, spent fifty-seven years in the service of Messrs. Boileau & Boyd. He is survived by two sons and a daughter.

FARREN.—At Londonderry, on January 2, the wife of Mr. Charles J. Farren, Ph.C., Moville, co. Donegal.

Goodwin.—At 215 Victoria Park Road, Hackney, London, E.9, on December 27, 1923, Mr. James Goodwin, chemist and druggist, aged fifty-eight. HORTON.—At Brighton, on December 17, 1923, Mr. Arthur Thomas Horton, Ph.C., aged eighty.

MILES.—At Weymouth, on December 30, 1923, Mr. Charles Miles, chemist and druggist, aged fifty-nine.

MURRAY.—At 23 Katharine Avenue, Linthouse, Glasgow, on December 27, 1923, suddenly, Christian Moyes, wife of Mr. David Murray, chemist and druggist.

PHILLIPS.—At Tenby, on December 23, 1923, Mr. Benjamin Phillips, chemist and druggist, St. Clears, aged sixty-two.

SEWARD.—At his residence, "Coppins Wick," Clacton-on-Sea, on January 6, after a long and painful illness, patiently borne, Mr. Samuel Melhuish Seward (founder of The Rosmarine Manufacturing Co., 52/54 Stamford Street, London, S.E.1), aged seventy-nine.

TEBBUTT.—At Hendon, London, N.W., on December 16, 1923, Mr. Edwin Tebbutt, chemist and druggist, aged seventy-two.

Treatt.—At The Mill House, Elstead, on January 6, Mr. Richard Court Treatt, Dunster House, Mincing Lane, and Elstead, Surrey, aged seventy. By the death of Mr. Treatt, Mincing Lane circles have lost a most distinguished member and the essential oil and perfumery trades one who was widely known and respected. A great traveller, Mr. Treatt had at various periods visited the most important countries of the world. He was an expert linguist, being familiar with several European languages as well as Arabic. Originally in the diplomatic service in the Near East, Mr. Treatt gained his first serious acquaintance with the essential oil trade as a young man through an offer of an agency for Turkish otto of rose. This he accepted, opening an office in Bond Street, London, W., about 1886. Learning that he was in an unsuitable neighbourhood for that kind of trade he promptly removed to Dunster House, Mincing Lane, E.C., where the business has been carried on ever since. His business acumen early led him to specialise in ambergris, musk, civet, otto and essential oils. How well he succeeded in so doing is common knowledge. As an expert in ambergris he had few equals, and it is of interest to recall that in 1913 he carried through the largest recorded deal in that substance. On the wall of his office hangs the framed cheque for the sum that was paid—£11,147 19s. 7d. In October 1913 a private limited liability company was formed, with Mr. Treatt as managing director and Mr. Arthur Cordrey and Mr. A. C. Stirling as directors. The business will be contined as heretofore by these two gentlemen. Mr. Treatt leaves two sons and a daugher. The funeral took place on January 9 at Elstead.

WINGFIELD.—On December 27, 1923, Mr. Sidney Wingfield (Barnes & Crompton, Ltd., chemists, Preston, Lancs), 12 Suffolk Road, Bournemouth.

Wills

MR. JOHN BAXTER, Talbot Street, Grangemouth, who died on October 2, left personal estate valued at £656 is 2d.

MR. JOHN RYMER YOUNG, J.P., F.C.S., Ph.C., The Knoll, Appleton, and Sankey Street, Warrington, who died on November 13, left estate of the gross value of £11,404 5s. 8d., with net personalty £7,001 2s. 10d. Probate of his will has been granted to his widow, Mrs. Mary Jane Young, the sole executrix, to whom he left all his property absolutely.

MR. EDWARD ROBINSON HOLLIER, retired chemist and druggist, Granville Street, Copthorne Road, Shrewsbury, who died on July 11, has left a fortune of £18,883 4s. 11d., with net personalty £17,946 4s. 2d. Probate is granted to his son, E. G. Hollier, King's Heath, Birmingham, and H. W. Hughes, Shrewsbury. The testator gives £500 to his grandson Frank, £150 to his servant E. M. Williams, and the residue between his sons and daughter Caroline Gertrude Hibbert, his wife having predeceased him.

Trade Notes

Lacteol tablets.—Wilcox, Jozeau & Co., 15 Great St. Andrew Street, London, W.C.2, announce a reduction in the wholesale price of lacteol tablets.

The Telegraphic address of Fulford, G. T., Co., Ltd. (of Canada), whose advertisement appears in *The Chemist and Druggist Diary*, 1924, is "Trend, Eusroad, London."

INTERCHANGEABLE LENSES.—Raphael's, Ltd., Hatton Garden, London, E.C.1, who have perfected the manufacture of interchangeable lenses for spectacles and eyeglasses, invite applications for quotations for the various grades.

BOTTLE-FILLING MACHINES — John P. Jackson & Co., Ltd., Pownall Square, Liverpool, illustrate in their advertisement a convenient bottle-filling machine, which is a great time-saver to all in the drug-trade who pack liquids.

EGG PRESERVING.—Tomlinson & Hayward, Ltd., Lincoln, are in an unrivalled position to supply waterglass packed ready for sale. The company ask chemists to write for particulars of mutual advertising that can be arranged for agents.

"Optarson," as given in the advertisement of The Bayer Products, Ltd., in *The Chemist and Druggist Diary*, is the correct designation of the drng which inadvertently appeared in The Chemist and Druggist, December 1, as "Optarsol."

GRIPS PASTILLES.—In connection with an advertising campaign which is being inaugurated in the Press of Northern Ireland, a visit is being made to the various cities of "Dr. Grip," the personification of Grips Firstaid Pastilles. The proprietors, J. W. Lightbown & Sons, Accrington, offer aid in arranging window displays.

BURROUGHS WELLCOME & Co., the announcement of the incorporation of which as a private limited company is made elsewhere in this issue, was founded in 1880 and is the successor of the business of Brockedon, who originated compressed chemicals in 1842. Mr. Henry S. Wellcome, the principal, became sole proprietor on the death of Mr. S. M. Burroughs in 1895. The products of the firm have always been based on original, scientific and technical research, and the business is conducted on strictly ethical lines.

Burroughs Wellcome & Co. are credited with having revolutionised the method of administering medicines. They have pioneered the introduction of many notable agents employed in modern medicine, and have developed many new processes. The exclusive machinery, invented by them, ensures special accuracy of dosage in compressed products issued under the "Tabloid," "Soloid" and other brand names. The thief offices are Snow Hill Buildings, Holborn Viaduet, London, E.C., and there is a London exhibition room at 54 Wigmore Street for the convenience of physicians, surgeons and pharmacists. The chief works are at Dartford, Kent, and are known as the Wellcome Chemical Works. There are other establishments in New York, Montreal, Sydney, Cape Town, Milan, Bombay, Shanghai and Buenos Aires. The staff numbers over 2,200, and includes many highly-qualified scientific workers. In addition to the products mentioned above, Burroughs Wellcome & Co. have won world fame for malt products such duction of many notable agents employed in modern come & Co. have won world fame for malt products such as "Kepler" malt extract and "Kepler" cod liver oil with malt extract, and their name is also intimately associated with fine chemicals and alkaloids of exceptional purity issued under the "Wellcome" brand. Over 270 competitive highest awards have been bestowed upon Burroughs Wellcome & Co. at International Exhibitions for the excellence of their products. Recent developments of the business include the fine new offices in the centre of New York City. Of the more recent products issued "Neokharsivan." "Moogrol," and Insulin may be instanced. The conduct and management of the business will be continued on the same lines as heretofore. research and scientific institutions founded by Mr. Henry S. Wellcome and bearing his name will continue to be under separate scientific direction.

Recent Patents

Abstracts of specifications of recently-granted patents for inventions. The complete specification (1s. each including postage) of British patents can be obtained from the Patent Office, 25 Southampton Buildings, London, W.C.2, on quoting the name of the patente and the number of the patent.

GERMANY

Metal Polish.—A preparation for cleaning metal consisting essentially of lactic acid, mixed with chalk, solution of ammonia, soap and methylated spirit. (Byk-Guldenwerke Chemische Fabrik A.G. D.R.P. 386,058.)

Baking Powder Acid.—A process for preparing an acid constituent for baking powders, consisting in evaporating to dryness an equimolecular solution of a neutral alkaline tartrate and phosphoric acid. (Chemische Fabrik Budenheim. D.R.P. 386,021.)

Waterproof Prints.—The support, paper, glass, etc., is treated with a solution of 1. diazo. 2. oxynaphthalin. 4. sulphonic acid and resorcin, to which a metal salt is added, and after exposure to light is developed in an aqueous alkaline solution. (Kalle & Co. A.G. D.R.P. 386,434.)

Theobromine Crystals.—A process for obtaining pure theobromine in large crystals consisting in dissolving theobromine in hot dilute acid and allowing the solution to cool gradually, removing the acid from the crystals by washing with ammoniacal water. (E. Merck. D.R.P. 386,935.)

Aluminium Formate.—Molecular amounts of aluminium sulphate and sodium formate are separately submitted to exsiccation in vacuo at 100° C., whereupon they are mixed. By dissolving the mixture in water a clear solution of aluminium formate of desired concentration can be prepared. (Chemische Fabrik vorm. Goldenberg, Geromont & Co. D.R.P. 386,520.)

Information Department

INFORMATION WANTED

Postal or telephone information with respect to makers or firsthand suppliers of the undermentioned articles will be appreciated:

B/31. Alpha hot-water bottles
L/51. Boziol (for malaria)
B/31. Butterfly grease paints
L/21. Caraline curative smelling salts
S/91. Chaulmocgra soap
E/11. Creamodent
M/31. Florence surgical silk
B/112. Jacqualine eiled silk
Jamssen's arsenical
saap
K/51. Kilbun " (for destroying rabbits)
Mystery advertising
postcard (plain but
when rubbed up
deevlops required
advertisement)

J/81. Peter Moller's cod-liver
oil
T/2012. Pharmacy dials (for
indicating on medicine bottles when
next dose is due)
S/81. Small glass balls for
filling smeiling-salt
bottles
F/2912. Taft's Asthma Cure
M/81. Tolysin
E/81. Tonking's linseed emulsion
D/21. Trilene tablets
A/11. Uricilla tablets (not
Urillac)
M/71. Vedox rheumatic tablets
R/1912. Yenoline (for piles)

INFORMATION SUPPLIED

Inquiries regarding the following articles have been answered. The information as to supply will be given to others who send a stamped, addressed envelope to the Information Department, THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C. 4.

Aniodol. T.2712.
Barff's Boro Glyceride. H/11
Caloplast. D/2712
Compressed face powder machines. O/3112
Deschlens Haemcglobin Syrup.
M/3112
Dr. Boyle's nitrous oxideoxygen ether apparatus. L/2312
Etherium. S/01.
Gold and silver leaf for pill coating. P/11
Hewthorne's veterinary pre-

Juncra wine. M/3112
Olivia soft soap. M/11
Parchment containers (greaseproof). C/3112
Pertussin. M/312
Pertussin. M/312
Powder weighing and wrapping machine. B/2912
Propert's cloth balls. T/2712
Thiocol. M/3112
Silkodono. L/11
Small aluminium face cream
boxes. B/3112
St. Amaund salicin. W/11
Stipendum pots. B/3012

Observations and Reflections By Xrayser II.

The Point You Make

in your article on stamp duty is a sound one; it is the meaning of the verb "to utter" at the time of the passing of the Act of 1812; that is alone relevant. That the definition you quote from Johnson was then and had for a long time been the current one is certain, but the terms of the definition need to be themselves defined. About "to sell" there is no question, but what is the meaning of "to vend"? Johnson himself defines it as "to sell; to offer to sale." Bailey (1782) has "to sell, to set to sale, to put off commodities." Dycke (1744) says, "to sell, dispose of, exchange, put off, put up, or set to sale"; and he defines "utterance" in the same sense, adding to the usual definition, "also, the offering or exposing any commodity to sale." Both Minshen (1627) and Littleton (1693) treat "utterance as equivalent to "sale," but I am afraid the wider meaning was well established in 1812. The passage from Shakespeare quoted in the conduct of the case proves nothing, one way or the other. No doubt the apothecary meant that he was not allowed to "sell" the poison asked for, but this does not exclude the other meaning.

Mr. Antcliffe

raised a very nice question at last week's meeting of the Council. Substantially, it is this: What amount of initiative, if any, is allowed to branches of the Society in matters, purely local, affecting education, or, inferentially, in other matters of local importance that come within the sphere of the Council's action? No definite official answer was given, but Mr. White's remarks show what the mind of the ruling spirits in the Council is. The initiative in the case supposed lies always with the Council itself. There is no doubt much to be said for this view, and little or nothing to be said in answer to it, except by way of caution. It would never do, as Mr. Antcliffe admitted, for individuals to commit the Council to any course of action, and what is true of individuals is true of local groups of individuals. But there is a danger of over-centralisation to be guarded against, and it is to be hoped that the branches will stick up for their rights and not be afraid to make their views known, or even to insist upon their being given their due weight.

Your Last Week's Article

on Insurauce dispensing terms was one of the most illuminating and important of the series. The argument against the justice of having to supply a fifteen-shilling article for the same amount of profit (that is, nominal profit) as an eightpenny or ninepenny one is unanswerable, and might be extended to other articles than proprietaries. The greater the cost of the article the greater the amount of capital invested in the business, and the greater the loss on dead or deteriorated stock—a loss to which we are peculiarly liable in the dispensing department, since we have there no influence upon the demand. Consequently, a fee which might be accepted as sufficient on an inexpensive article is absurdly inadequate on one that costs, it may be, ten times as much. I have one criticism to make on your article—the fees you propose for Insulin seem to me much too small. They are hardly more than we have contended for on ordinary prescriptions.

The Pharmaceutical Society

is urged by a writer of up" the price-cutting case recently reported from a northern county. The British Medical Association, he says, deals with its members for unprofessional conduct; why should not our Society do the same? The answer obviously is because it cannot. The Pharmacy Acts give it no power to do anything of the kind. The Council might, I suppose, expostulate with the offender on the score of ethics if it did not object to being told to mind

its own business, but I can hardly conceive of its doing so. It gets more kicks than ha pence already, and if it were to interfere in the private affairs of its members in this fashion it would probably make more enemies than it would conciliate. There is, indeed, a body that might move, and ought to move, in the matter—the Retail Pharmacists' Union. The Society has nothing to do with prices, but the R.P.U. has; if it sits still and sees its price list flouted by one of its own officers, it will bring itself into ridicule, if nothing worse. When the matter was first brought to my notice. I thought it only proper to wait and see what the R.P.U. would do before saying anything; but I have not yet heard of anything having been done. I gather, however, that the Union's price list is still in circulation. Is it worth while?

A New Year's Gift

of a most acceptable kind reached me on January 1, a copy, namely, of Mr. W. H. Saunders's interestingly written and charmingly illustrated little book, "Roving the World," a record of his recent tour written at the solicitation of many of his friends. Though he disclaims all pretence to literary style and sets down only a plain unvarnished tale, Mr. Saunders has succeeded in giving at least one of his readers a most vivid impression of the scenes and adventures he describes, and in conveying to him no small share of his own enjoyment of his Mr. Saunders evidently set out with the intention of being pleased with everything, a frame of mind that not only goes far to ensure enjoyment, but is most conducive to a sympathetic appreciation of whatever one meets with. It is, of course, only a sort of bird's-eye view of the world that we get in such a rapid flight, but it is astonishing how much Mr. Saunders saw and conveys. to his readers; indeed, I do not remember to have read any book of the kind equal to this in the amount of solid information it contains per page—I nearly said "of cold facts," but this would have been most inappropriate, for Mr. Saunders's enthusiasm gives a roseate hue even to Chicago. He is most expansive. however, over Japan, in which country, I suspect, he lost a little of his hunger for facts in personal enjoyment. In a book so full of information it would be strange not to find some small errors. I notice one with regard to the name New England. This did not originate with the Pilgrim Fathers, but with Captain John Smith, the hero of the Pocahontas story, whose map of New England was published in 1616, four years before the "Mayflower" sailed. Nor had the Pilgrim Fathers anything to do with the founding of the Massachusetts Bay Colony.

Town Travellers,

I suppose, take inferior rank to those who range the whole country, or a large part of it; but, if so, it is not because they are deficient, as a class, in personality, or at least it was not so sixty years ago. Some of them, indeed, had more personality than they could manage, and though excellent good fellows in their way, I am afraid they did not, as the old song has it. "always come home to tea." Of such were W. J. F. (I am not quite sure of his initials) of the velvet jacket and dangling eyeglass, the most distinguished-looking man of his class that I remember; W. M., the most accomplished master of invective and complete wag off the boards—he would have made a first-rate actor in such parts as Compton used to play; and ——, a first-rate traveller when sober, and the most popular man on the road in the town I am speaking of. I found a different type of man in London when I came up from the country in the late 'sixties. The one I remember most vividly is Mr. Jeans, who travelled for Barron, Harvey & Co. He was a thorough business man (so far as I could judge), quiet in manner, and without any aggressive "push"; but he gave the impression of complete competence, and never went away without an order. He had one rather rare accomplishment: he whistled like a nightingale; and if he had to wait a moment for any reason, he would step into the street, and we could hear him whistling under his breath the loveliest airs from Italian or German opera, note-perfect, and with wonderful expression.

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be given on MONDAY, 14TH INST., at 7.45 P.M., at THE EVAN WILLIAMS DEMONSTRATION HALL, 14/15 Union St., W.1 (behind the Middlesex Hospital). Lecture by Mr. GRAHAM CAMERON, Lecturer to the National Cash Register Co., Ltd.

There is no charge for admission, and it is hoped a considerable number of Chemists will be able to attend.



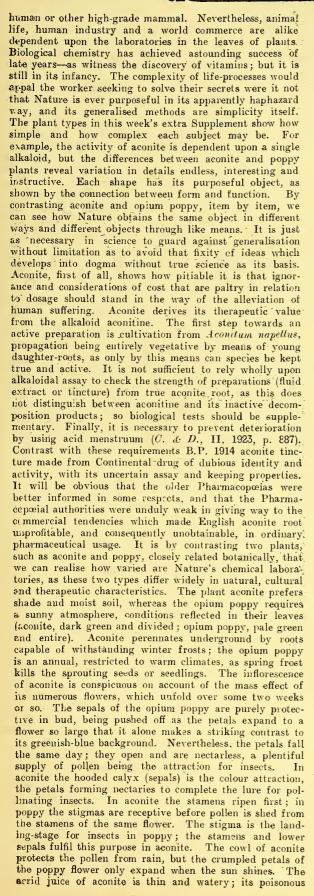
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Editorial Articles

Nature Pictures of Medicinal Plants

It is fitting that our hundredth volume should break new ground in connection with medicinal plants, which have from time immemorial been an unfailing attraction to mankind. Art and science have, therefore, combined, through progressive journalism, to portray in colour, plants of pharmaceutical interest in their natural surroundings. Though ordinarily artist and scientist are far asunder in temperament and thought, they meet on common ground in appreciation of the sublime ease with which Nature surpasses their best efforts in contrast and chemical syntheses of colours. These delicate effects and substances likewise typify life in general in being transient stages in an ephemeral existence. Scientists are solving some of Nature's secrets now that they have realised that the everchanging face of Nature finds its reflection in the ceaseless physical phenomena occurring at surfaces or "interfaces" between liquids, solids and gases. Physicists and pharmacologists, not hampered by tradition, have already broken fresh ground in this promising field of investigation, which has given plant chemistry and physiology a new significance. Uncivilised man invested plants with healing virtues more often imaginary than real, assuming in his supreme egotism that these properties were created for his special benefit. The cold light of science shows that the action of drugs and the value of spices are more likely to be a somewhat fortuitous combination of physical and chemical effects on the complex sensory system of the



principle is a single alkaloid-aconitine. The poppy has a well-developed laticiferous system, with milky narcotic contents containing many alkaloids, providing materials for some fifty years of a chemical research which is yet far from complete. The older botanists studied science in general, and dimly perceived the wealth of foods and chemicals locked in the treasure house of Nature. This gives the clue to the surprising energy and industry devoted in the past to the production of hand-coloured illustrations of economic plants. Since the latter years of the eighteenth century the publication of botanical illustrations has been uninterrupted. William Curtis began the issue of his "Flora Londinensis" in 1777, and by 1798 a total of 432 plates had appeared. Meanwhile (in 1787) he founded the "Botanical Magazine," which ran continu-cusly until 1921 (C. & D., II, 1921, p. 664), and has again been revised after a brief suspension. James Sowerby brought out, in 1790, the first of the thirty-six volumes of his "English Botany," which was completed in 1814, and included 2,592 coloured plates. A smaller edition followed in 1831-46, and a third, edited by J. T. B. Syme, and usually considered a separate work, in 1863-86. Sowerby's "Coloured Figures of English Fungi," begun in 1797 and firished in 1815, comprised 440 plates. The "Medical Botany" of William Woodville, M.D., in four volumes, with 274 coloured plates, appeared in 1790-94, and was so much appreciated that a third edition was reached, under the editorship of Sir William Hooker, in 1832, with an additional volume compiled by George Spratt. The "Hortus Elthamensis" of J. J. Dillenius (which, as mentioned in our Special Issue for 1923, was the subject of a tribute from Linnæus) dates from 1732 and contains 417 etchings; and the "Historia Muscorum" of the same author (1741) is illustrated by eighty-five plates. The posthumous "Flora Graeca" of John Sibthorp, with 966 coloured plates engraved by James Sowerby from the drawings of Bauer, appeared at intervals from 1806 to 1840, the cost of publication being estimated at £25,000. Another expensive series of ventures was that of R. J. Thornton, some of whose coloured plates are still on sale in booksellers' shops. Thornton, who, like Curtis, was descended from an apothecary, graduated as a bachelor of medicine at Cambridge, and appears to have set up as a practitioner. In or about 1799, however, he began the issue of "New Illustrations of the Sexual System of Linnæus," for the production of which work he engaged well-known painters, engravers and poets. Several hundred coloured plates of various sizes appeared during the next few years, the largest measuring about 24 inches by 181 inches. Thornton suffered severely in pocket by the lavish scale on which he worked, and at one point in his career endeavoured to recoup himself by means of a lottery. "The Botanical Cabinet," a quarto publication for which Conrad Lodiges and his sons were responsible, ran from 1817 to 1833, and had a considerable vogue. Stephenson and Churchill's " Medical Botany," dealing with the plants of the London, Edinburgh and Dublin Pharmacopæias, appeared (in four volumes with 185 coloured plates) in 1831. "The Botanical Miscellany," the editor-in-chief of which was Sir William Hooker, first appeared in 1830, and, altering its title successively to "The Journal of Botany" and "The London Journal of Botany," continued till 1857. four volumes of Bentley and Trimen's "Medicinal Plants," including 306 coloured plates, came out between 1876 and 1880. The "Transactions" of the Linnean Society yield, of course, many interesting pages from the point of view of pharmaceutical botany. Turning to the Continent, Benjamin Delessert's "Icones Selectæ Plantarum," published in Paris between 1820 and 1846, is a work of imposing proportions, comprising 500 illustrations. C. F. de Ledebour's "Flora Rossica" is a three-volume monograph issued at Stuttgart, 1842-51. In Germany the following illustrated works on medicinal plants have appeared :--"Getreue Darstellung und Beschreibung der in der Arzneykunde gebräuchlichen Gewächse," by F. G. Hayne,

1805-49 (14 vols.); "Plantæ Medicinales: oder Sammlung offizineller Pflanzen . . ," by T. F. L. Nees von Esenbeck, 1828 (2 books) and 1833 (supplement), a sumptuous work in folio with 552 plates, nearly all of which are coloured; "Genera Plantarum Floræ Germanicæ," by the same author and F. C. L. Spenner, 1833-59; "Darstellung und Beschreibung sämmtlicher in der Pharmacopæia Borussica aufgeführten offizinellen Gewächse," by O. C. Berg and C. F. Schmidt, 1858-63 (4 vols., with 204 plates, most of them coloured); "Flora von Deutschland, Osterreich und der Schweiz," by Professor O. W. Thomé, the publication of which began in 1903. In Amsterdam, from 1678 to 1703, there was published in 12 parts, the "Hortus Indicus Malabaricus," begun by Henricus van Rheede van Draakenstein and Johannes Casearius (with notes by A. Syen), and continued by J. Mınnicks, Th. J. van Almeloveen, and A. van Poot. An edition of Part One only appeared in London in 1774. The United States has given us :-"Vegetable Materia Medica," by W. P. C. Barton, 1817-18 (2 vols., coloured plates); "Flora of North America," by the same author, 1821-22 (2 vols.); Bigelow's "American Medical Botany," 1817-20 (3 vols.); Asa Gray's "Genera Fioræ Americæ . . . ," 1849 (2 vols.). It is obvious that hand-drawn colour prints strained severely the resources of the enthusiasts responsible for their production, even when the edition was limited in number to attract the wealthy art collector. It is certainly a new venture to give away such pictures, and in presenting to our readers a series of beautiful studies of plants yielding drugs of vegetable origin we trust this will fulfil many purposes, including recrudescence of interest in crude drugs both by student and the public. They involve sixteen separate printings and are worthy of framing for hanging in the pharmacy. These illustrations have been specially printed for us by Gehe-Verlag G.m.b.H., Dresden, which publishes twenty series, each consisting of six of these coloured reproductions of medicinal plants in their natural surroundings, on cards measuring $5\frac{1}{2}$ in. by $3\frac{1}{2}$ in., which are also supplied on art mounts. They are obtainable in this country from Wheldon & Wesley, Ltd., 2, 3 and 4 Arthur Street, New Oxford Street, London, W.C.2.

Insurance Dispensing Terms XII. Proprietary Preparations (continued)

THE Departmental Committee condemned the ingredientpricing system of the 1915 tariff because it produced different rates of profit to different chemists, and because it was by no means certain that the chemist whose business expenses were higher would receive the higher rate of profit. The Departmental Committee set out in their commercial tariff to correct this anomaly, and if ordinary drugs were the only preparations dispensed their remedy might have proved effective. But, in correcting the anomaly which existed in connection with drugs and ingredient prices, they set up a system which has produced other anomalies in connection with establishment charges, because the increase in the number of the proprietary preparations which are prescribed has upset the balance of the situation which existed in 1915. To anyone acquainted with the conditions under which Insurance dispensing is carried on and the methods by means of which the payments due to chemists for the work they have done are calculated, it is fairly obvious that all chemists do not receive the same return for their outlay for Insurance dispensing. The chemist's profit on his work largely depends upon the habits of the practitioners for whom he dispenses. He is in the doctor's hands entirely, and has no control over what the practitioner chooses to order. And while some practitioners stick to old-fashioned ex-

temporaneous pharmacy, others are ready to prescribe any new remedies which may be brought to their notice by manufacturers' representatives. The cost of these preparations does not affect the prescriber, but it is a vital consideration for the chemist who dispenses them-and the cost of special proprietary preparations is generally high. Apart from the initial outlay necessary to purchase the preparation, there are frequently extra expenses which, in the case of ordinary prescriptions, are not recoverable by the chemist from the Insurance Committee, The establishment allowance is supposed to cover ordinary business costs; but this allowance, which is added to each prescription in the form of one flat-rate figure, does not represent the same net value to all chemists. In our fourth article in this series (C. & D., November 10, p. 653) we showed that the present system of ingredient pricing raay yield to different chemists varying degrees of remuneration. A similar position arises in the case of the establishment allowance, largely because of the frequency with which proprietary preparations are now prescribed. This can be exemplified by considering two different types of business. Type number one may be situated in a somewhat poor district. The practitioners in the neighbourhood of the pharmacy have probably large numbers of persons on their lists, and perhaps do not often prescribe the newer remedies employed in connection with the methods of treatment which have grown up with the development of preventive medicine. The majority of the prescriptions which the chemist dispenses keep well within the borders of the drug tariff, and most of the mixtures ordered are taken from the local formulary. In the case of this shop the dispensing fees for all the prescriptions will probably equal in amount the total cost of the ingredients, and therefore the chemist's profit on his work bears a very fair proportion to his total receipts. His establishment charges are low; he has very few extra postages, cheque or telephone charges; and no bad stock or broken bulk packages are left upon his hands. Now consider type number two, the ordinary good middle-class type of family business. Situated in a modern suburban neighbourhood, it is probable that some of the doctors practising in the locality will at times prescribe vaccines and serums, preparations of colloidal metals and organotherapeutic products, the majority of these being of a proprietary character and of comparatively high cost. The chemist under such conditions must keep the more frequently used of these preparations in stock, with a consequent risk of deterioration and loss. His stock, therefore, is more valuable, his capital outlay greater, and his total turnover higher than those of the chemist in the poorer neighbourhood. Yet, in all probability, there are more threepenny than fivepenny fees in his Insurance dispensing, and the total value of his dispensing fees is considerably less than the total cost of ingredients. In fact, in spite of his increased turnover, his percentage of profit on his total receipts is less than that of chemist number one. When the number of special proprietary preparations ordered is high in proportion to the total number of Insurance prescriptions dispensed; the ordinary establishment allowance is not sufficient to cover the extra expense involved in obtaining There are so many occasions on these preparations. which it is necessary to incur extra expenses that the whole fee of threepence which is paid in respect of all preparations which do not require dilution or admixture by the chemist is frequently not enough to cover the chemist's out-of-pocket expenses in connection with quite an appreciable number of the prescriptions which are now

being issued to insured persons. A telephone call costs twopence; a stamp for an order costs at least a penny; the cost of a cheque in settlement is twopence; the postage of it is three-halfpence. So, in some cases, the whole of the threepenny dispensing fee and more is expended by the chemist almost before the patient receives the medicine, although the chemist is not paid until the lapse of perhaps two months. There is a tendency in some quarters to look upon these things as trifles; but they are important facts, and these facts may make all the difference between profit and loss on the work the chemist undertakes under his contract with the Insurance Committee. At the present time the only preparations in connection with which an allowance for out-of-pocket expenses is provided by the tariff are Insulin, serums, vaccines and oxygen. Presumably it is because of the fact that these are generally required quickly that these allowances are made, and it is more probable that extra expenses will be incurred in obtaining them than in the case of other preparations. There are, however, many other preparations which may be required with equal urgency. Any chemist can think of a dozen articles which are generally wanted in a hurry, and to obtain which it would be necessary for him to telegraph to the nearest wholesale house, if he is in the provinces, or send a special messenger for them if he is situated in the Metropolitan area. In private practice, of course, the patient would pay any charges which might be necessarily incurred in obtaining urgent supplies. But, in many cases, insured patients cannot afford to pay, and, moreover, they are promised free of charge, within certain limits, the same general attendance and treatment as a private patient can obtain. There is no general provision in the drug tariff for refunding carriage charges to the chemist in the case of Insurance prescriptions, and therefore in many cases the chemist has to pay these extra costs himself. If out-of-pocket expenses can be allowed in the case of Insulin, a preparation from the pancreas, there seems to be no reason why they should not also be allowed for preparations from the suprarenal or pituitary glands. Most of these preparations are of a proprietary character, and in view of the fact that the dispensing fee for uncompounded proprietaries is only threepence, irrespective of value, it seems to be desirable that a refund should be made to the chemist in all cases in which special expenses have had to be incurred in order to obtain proprietary medicines for insured persons. We think this is another question which should be taken into account when the terms of service for 1924 are being discussed. As a working basis, we suggest that out-of-pocket expenses should be allowed to the chemist in connection with the supply of :-

(1) All drugs dispensed in ampoules, whether of a proprietary nature or not.

(2) All proprietary preparations, such as Insulin, vaccines, serums, salvarsan or its substitutes, colloidal, glandular, peptone or any other preparations prepared for hypodermic, intramuscular or intravenous injection.

In addition to these, all special expenses (other than ordinary postal or telephone charges) which are incurred in obtaining any other proprietary preparation, or any non-proprietary (and non-tariff) preparation required in an emergency should be allowed to the chemist. The claim for these expenses might be made by a declaration on the back of the prescription-form that these expenses were in fact incurred, and this should be authenticated by the chemist's signature in just the same way as "urgent" dispensing fees must now be claimed.

THE revision of the Argentine customs tariff has afforded the pharmaceutical profession of that country an oppor-tunity to urge the necessity, on economic grounds, of creating a national pharmaceutical industry. It is pointed out that the manufacture of pharmaceutical preparations, and particularly of specialities, would not only give employment to a large number of pharmacists, who at the present time are compelled to seek a livelihood in administrative positions, since they can find no scope for their abilities in the profession itself, but would prove a source of considerable prosperity to the nation at large. Attention is drawn to the fact that the creation of this industry would lead to the utilisation of a large number of indigenous medicinal plants, and consequently to the establishment of a drug trade, which might be developed to permit even the exportation of drugs. Now, owing to the large number of foreign specialities which are imported, all attempts to create a national trade in drugs have been stifled. Further, many of the ingredients which enter into the composition of pharmaceutical statements which enter into the composition of pharmaceutical statements. tical specialities are available in the country, and in this connection mention is made of alcohol, sugar, glycerin, lanolin and organotherapeutic preparations. In an article dealing with this subject in the "Revista Farmaceutica," the writer remarks that "not only are these materials produced in the country; indeed, they constitute the sole medicinal products which are exported, with the exasperating feature that they are exported in barrels, in order to be readmitted in diminutive bottles after having undergone merely a few simple manipulations." Finally the point is emphasised that the manufacture of pharmaceutical specialities would benefit many other industries, such as glass and cardboard manufacturers, the printing trade, etc., and would give permanent employment to a large section of the population.

The Sampling of Medicines

The third section of a Ministry of Health circular (No. 462; 1d. net), dated December 28, 1923, and headed "Sale of Food and Drugs Acts. Public Health (Milk and Cream) Regulations, 1912 and 1917," deals with matters that have arisen in connection with the analysis of dispensed medicines. In our issue of August 4, 1923 (p. 183), we gave textually the recommendations of the Society of Public Analysis: the circular referred to, after quoting these, makes the following comment for the instruction of town clerks and similar functionaries:—

The object of the first suggestion [that the inspector be instructed to mark the height reached by the contents in the bottle] is to enable the analyst to ascerte in the total quantity of each of the ingredients (including the water or other "vehicle") present in the medicine. If he receives only a portion of the sample, representing an unknown fraction of the whole, he is only able to ascertain the relative percentages of the several ingredients; but if he is also provided with information as to the total quantity of the medicine dispensed he can then deduce the total amount of each of the ingredients as supplied by the chemist. These particulars will obviously be of importance to the council in considering what action they should take in regard to a medicine which has been inaccurately dispensed.

The Minister believes that the second suggestion [that the analyst and the medical officer of health be consulted as to type of prescription usable and desirability of taking prescedings is in accordance with the practice which is

The Minister believes that the second suggestion [that the analyst and the medical officer of health be consulted as to type of prescription usable and desirability of taking proceedings] is in accordance with the practice which is already largely adopted by local authorities. It is clearly desirable that, where a sample of medicine is taken for the purpose of checking the accuracy of dispensing, it should be so chosen as to be capable of accurate analysis. It is also desirable in considering whether or not proceedings should be taken under the Sale of Food and Drugs Acts that proper regard should be paid both to the degree of accuracy obtainable in the analysis of the article in question and to the margin of error allowable in ordinary dispensing operations.

It is possible, unfortunately, for schemes in respect of milk and medicine, like those of mice and men, to "gang agley." The degree of satisfaction to be derived from the final sentence of the passage we have quoted will depend on its application in practice.

U.S.P. "Admissions" and "Deletions"

Below are given the drugs and galenical preparations which it is proposed to include in the next United States Pharmacopæia, also those in the present U.S. Pharma-Pharmacopeia, also those in the present U.S. Fnarmacopeia which it is intended to omit. The titles marked with an asterisk were previously announced for deletion, but which it has since been decided to retain. No doubt a "dope" controversy is concerned with the entry, "diacetylmorphime hydrochloridum." Spiritus aetheris nitrosi, tinctura valerianæ ammoniata and various other galenicals would appear somewhat belated inclusions, but the ways of Pharmacopæias are ever mysterious, as witness the deletion of acid oleic, linimentum terebinthinæ, and pilulæ rhei compositæ.

Further admissions to the U.S.P. X .:-

Acetum Seillæ Althaca *Ammonii Salicylas
*Bismuthi Subsalicylas
*Caffeina Citrata
*Calcii Glycerophosphas
Carbon Tetrachloride Ceratum Ceratum Cantharidis *Cimicifuga *Diacetylmorphinæ Hydrochloridum Emplastrum Belladonnæ Emplastrum Cantharidis *Extractum Cimicifugæ *Extractum Malti Fluidextractum Belladonnæ Foliorum (new—not in U.S.P. IX; the Fluid extract of the root is also official) *Fluidextractum Sarsa-

Fluidextractum Uvae Ursi Ipomoea Orizabensis (to re-place Scammony) Liquor Zinci Chloridi *Maltum Massa Ferri Carbonatis Pilulæ Phosphori Quinidinæ Sulphas Quinine Ethylcarbonato ("Euquinine") *Sarsaparilla Spiritus Aetheris Nitrosi *Syrupus Sarsaparillæ Compositus Terebenum Tinctura Cantharidis Tinctura Lobeliæ Tinctura Tolutana Tinetura Valerianæ Ammoniata Tinctura Zingiberis Unguentum Hydrargyri Nitratis

* These titles were announced as deletions, but have since been admitted.

The following general articles will be included:-

Aquæ Aquæ Aromaticæ Decocta Extracta Fluidextracta

parillæ

Fluidextractum, Scillæ

Infusa Suppositoria Tincturæ Triturationes

The following articles official in the U.S.P. IX are to be deleted:

Acidum Oleicum Collodium Cantharidatum Extractum Aconiti Extractum Gentianæ Extractum Opii Fluidextractum Aconiti Fluidextractum Gentianæ Fluidextractum Lobeliæ Nucis Fluidextractum Vomicæ

Fluidextractum Veratri Viridis Linimentum Terebinthinæ Liquor Sodii Glycerophos-

Oleatum Hydrargyri Olcoresina Cubebæ

Oleum Sesami Opium Deodoratum Pilulæ Ferri Iodidi Pilulæ Rhei Compositæ Pulvis Aromaticus Scammoniæ Radix (replaced by Ipomoea Orizabensis) Serum Antidiphthericum Siceum Serum Antitetanicum Siccum Spiritus Juniperi positus Tinctura Cannabis Tinctura Cinnamomi

Trochisci Potassii Chloratis

Trochisci Cubebæ

German Trade with Britain

UNDER the title "Confidential Hints on Exports to England," a German semi-official paper publishes the fol-lowing note: "A consequence of the order of November 15, 1923, whereby the German government no longer refunds the English 26 per cent. Reparation Levy, is the loss of the greater part of our export trade to England, except in cases where it is possible to induce the English customer to bear the cost of the 26 per cent. Levy. As we have repeatedly stated, there is no immediate prospect of this order being rescinded, neither is there any likelihood, for the present, that the English government will suspend the collection of the 26 per cent. Levy. Nevertheless, the possibility exists of maintaining at least a portion of our export trade to England, although attended by complica-

tions and expense. Strictly confidential information dealing with this matter will be supplied on request by the Foreign Trade Association to registered German firms."

German Opium Regulations

CERTAIN modifications have been sanctioned by the German Reichsrat in the regulations of 1921 giving effect to the provisions of the Opium Law of 1920. In future an application for permission to import, or export, nar-cotics will have to be made to the Imperial Board of Health, which, if granted, will issue a permit available for a period of three months from the date of issue, and which will not be transferable. On the expiration of this period unused permits are to be returned to the Board. The custom house through which the narcotics have passed will be required to certify their passage on the permit, which has then to be sent in to the Imperial Board of Health, in proof of the fact that importation, or exportation, of the same has actually taken place. Licensed dealers may obtain an export permit enabling the actual supplier to undertake the dispatch of the drugs abroad on their behalf. The admission of narcotics from abroad into a German free port or free district is regarded as constituting importation, whereas the passage of narcotics from Germany into a free port is not regarded in the light of exportation. In future, export permits for narcotics will indicate the actual country of destination, and will not be made out for deliveries consigned to a free port. The supply and delivery of narcotics to a foreign purchaser, or to his authorised agent, within the limits of the German Reich, including the free ports and districts, is not to be treated as constituting exportation, and such transactions will require a delivery order. Import and export licences already granted by the Imperial Commissary for Exports and Imports retain their validity until February 1, 1924.

Coming Events

This section is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

Tuesday, January 15

Glasgow Pharmacy Club (Rambling Section).—Visit to the Kelvingrove Art Gallery. Meet at Argyle Street entrance at 3 p.m. Leader: Mr. Wm. Simpson.

Royal Institution of Great Britain, 21 Albemarle Street, at 5.15 p.m. Prof. W. E. Dixon on "Drug Addictions (Lecture I)."

Wednesday, January 16

Wednesday, January 16

Edinburgh Chemists', Assistants' and Apprentices' Association, 36 York Place, at 8 p.m. A. J. Schorn, Ph.C., on "Chemistry of Some Antipyretics." H. Stout will give a "Practical Demonstration on use of Polarimeter."

Guild of Public Pharmacists, 17 Bloomsbury Square, London, W.C., at 8 p.m. E. W. Morris, C.B.E., Ph.C., on "Future of Voluntary and Municipal Hospitals."

Liverpool Chemists' Association and Branch of the Pharmaceutical Society, Royal Institution, Colquitt Street, at 8 p.m. Annual meeting.

Liverpool Pharmacy Club. The Tower, New Brighton, Dance

Liverpool Pharmacy Club, The Tower, New Brighton. Dance from 7-11 p.m.

National Association of Women Pharmacists, Hotel Russell,
London, W.C., at 8.39 p.m. Mr. Abbott (Clerk to Middlesex
Insurance Committee) on "National Health Insurance as
Affecting Public Health."

Thursday, January 17

The Chemical Society, Burlington House, Piccadilly, London, W.I., at 8 p.m. Papers on "Suggested Explanation of Allotropic Transformations of Iron," by R. H. Atkinson; "Activity of Water in Aqueous Hydrochloric Acid," by H. J. E. Dobson and I. Masson; "Freezing of Inorganic Hydrogels," by J. R. I. Hepburn.

Friday, January 18

Royal Institution of Great Britain, 21 Albemarle Street, W.1, at 9 p.m. Prof. H. E. Armstrong, LL.D., F.R.S., on "The Scientific Work of Prof. Sir James Dewar, LL.D., D.Sc., F.R.S."

London (Western) Pharmacists' Association.—A smoking concert will be held on January 24 at the Horseshoe Hotel, Tottenbam Court Road, at 8.30 p.m. Tickets, 3s. each.

Thamks Valley Pharmacists' Association.—The annual dinner will be held on January 23 in the Restaurant Frascati, Oxford Street, London, W., at 6.30 p.m. Tickets (12s. 6d. each) from C. Goode, 11 King Street, Twickenham.

First-Aid in Factories

THE Factory and Workshop Act, 1901, provides for factories and workshops being kept in sound sanitary condition. Aerated-water factories, bottle-washing works, condensed-milk manufacture, fancy-box works, glue-making, grinding, indiarubber works, salt-making, soapmaking, and varnish-making works are among those covered by the Act. Arsenical manufactures, lead-paint manufacture, bottling aerated waters, manufacture of chrome compounds, mercurials, and vulcanising indiarubber with bisulphide of carbon are treated as dangerous trades. Under the powers conferred on him by this Act (Section 79) and the Police, Factories, etc. (Miscellaneous Provisions) Act, 1916, the Home Secretary has from time to time made Orders dealing with the provision of ambulance and first-aid arrangements in blast furnaces, copper mills, iron mills, foundries, and metal works (1917); in factories in which bichromates are used (1918); where fruit preserving is carried on (1919); in oil and cake mills (1919); in gut-scraping, washing and tripe factories (1920); in places where the gutting, salting and packing of herrings (Norfolk and Suffolk) is carried on (1920); in laundries (1920); in aerated-water factories (1921); in premises where dry or drysalted skins are handled (1921); and in chemical works (1922). Under these Orders the provision of first-aid boxes or cupboards these Orders the provision of first-aid boxes or cupboards is compulsory, each box or cupboard having to contain certain dressings and applications. The Workmen's Compensation Act, 1923 (C. & D., II, 1923, p. 847), extends these Orders requiring first-aid provision to all factories, and Section 29, which deals with this subject, was printed in the C. & D., January 5, p. 27.

CONTENTS OF FIRST-AID BOXES

The prescribed standards for the first-aid boxes or cupboards under this Section of the Act are as follows :-

For factories employing fifty persons or less

Each first-aid box or cupboard shall contain at least:-

(i) A copy of the first-aid leaflet (Form 923) issued by the Factory Department of the Home Office. (ii) A sufficient number (not less than a dozen) of small

sterilised dressings for injured fingers.

(iii) A sufficient number (not less than six) of medium sterilised dressings for injured hands or feet.

(iv) A sufficient number (not less than six) of large sterilised dressings for other injured parts.

(v) A sufficient number of sterilised burn dressings (small and large).

(vi) A sufficient supply of cotton wool, in 2-oz. packets. (vii) A 2 per cent, alcoholic solution of iodine. (viii) A bottle of sal volatile, having the dose and mode

of administration indicated on the label.

(ix) Eye drops, prepared as described in the first-aid

leiflet (Form 923).

Each first-aid box or cupboard shall be distinctively marked with a white cross on a red ground.

For factories employing more than fifty persons

Each first-aid box or cupboard shall contain at least:-

(i) A copy of the first-aid leadlet (Form 923) issued by the Factory Department of the Home Office.
(ii) A sufficient number (not less than two dozen) of small sterilised dressings for injured fingers.
(iii) A sufficient number (not less than one dozen) of medium size sterilised dressings for injured hands or feet.
(iv) A sufficient number (not less than one dozen) of medium size sterilised dressings for injured hands or feet.

(iv) A sufficient number (not less than one dozen) of large sterilised dressings for other injured parts.
(v) A sufficient number of sterilised burn dressings (small and large).

(vi) A sufficient supply of sterilised cotton wool, in \frac{1}{2}-oz. packets.

packets.

(vii) A 2 per cent. alcoholic solution of iodine.

(viii) A bottle of sal volatile, having the dose and mode
of administration indicated on the label.

(ix) E-e drops, prepared as described in the first-aid
leaflet (Form 923).

(x) A supply of suitable splints and cotton wool or
other material for padding.

(xi) A supply of adhesive plaster.

(xii) A tourniquet.

(xiii) One dozen roller bandages.

(xiv) Half a dozen triangular bandages.

(xv) Safety pins.

(xv) Safety pins.

Provided that items (x) to (xv) inclusive need not be included in the standard first-aid box or cupboard (a) where there is a properly equipped ambulance room, or (b) if at least one box containing such items and placed and maintained in accordance with the requirements of Section 29 of the Act is separately provided. Each firstsection 29 of the Act is separately provided. Each instantial box or cupboard shall be distinctively marked with a white cross on a red ground. In the case of any factory or part of any factory where first-aid boxes of a specified standard are required to be kept in pursuance of any Regulation or Order in force under the Factory and Workshop Acts, the standard for that factory or part of factory shall be that prescribed by such Regulation or Order Order.

COCAINE EYE-DROPS

In addition to stocking these first-aid cases, chemists should also be ready to supply bicarbonate of soda, packed in a suitable container, such as a 4-oz. kali bottle, and eye shades. The formula for the eye-drops, a quantity of which should be kept ready compounded, has been given in the *C. d. D.* on several occasions, and is repeated here for convenience :-

Hyd. Perchlor, in oastor oil 0.5 per cent. ... 1 in 3,000

Weigh 95 grams of castor oil into a flask capable of holding twice the quantity. Add 0.5 gram of powdered cocaine, Warm on a water bath till dissolved. While the solution is still warm (but not hot) add one c.c. of a solution containing 3.3 grams of mercuric chloride in 100 c.c. of absolute alcohol. Mix the solutions by rotating the flask.

We have worked out the cost and selling prices of this solution on the C. & D. Costing System, as by this method adequate allowance is made for wastage, time method adequate allowance is made for wastage, time and profit in manufacture and sale. It is found that the cost is 3s. 7d. per 100 cc., and the selling price is 1s. 9d. per half ounce, to which, when supplied, must be added the value of the container. This is the quantitation of the container. that will usually be required and should be supplied in a bottle from the cork of which a camelhair brush is pendent in the fluid. The Secretary of State has issued a general authorisation (C. & D., II, 1921, p. 286) enabling the occupier of a factory or workshop to precure this preparation, provided it is used for this preparation. for this purpose and no other, and kept in the custody of the occupier or a responsible official nominated in of the occupier or a responsible official nominated in writing by the occupier, which nomination shall be kept at the works and shall be available for inspection. This matter is further explained in the *C. & D. Diary*, 1924, p. 258, where it is pointed out that it is the owner of the factory, or in case of limited companies the secretary, who must sign the poisons book and the usual cross reference must be made in the Dangerous Drugs Act register. It is particularly to be noted that a medical man cannot, under the Regulations, write a prescription for dangerous drugs for the use of a factory, and that the factory owner is not permitted, under the general authorisation, to purchase "dangerous" drugs which do not conform to the above formula. The Form 923, one copy of which is to be included in the box, is obtainable from the Stationery Office, Kingsway, London, w.C.2 (price 1s. dozen, plus postage). It deals, among other things, with the treatment of minor injuries. For burns or scalds it is recommended that the part be covered with sterilised dressing, the use of ointment or oil, such as carron oil, being condemned. For an acid burn it is, directed that the burn be flooded with cold water, sprinkled with bicarbonate of soda, and a sterilised dressing applied. For eye injuries the drops are used, the eye covered with a shade, and the case handed over to a doctor.

DEFINITION OF FACTORY

Factories, according to the Factory and Workshop Act, 1901, are defined as (a) textile factories or (b) non-textile factories. Textile factories are premises where mechanical power is used to move any machinery employed in preparing, manufacturing or finishing, or in any process incident to the manufacture of cotton, wool, hair, silk, flax, hemp, jute, tow, china-grass, cocoa-nut fibre, or

other material, either separately or mixed together or mixed with any other material or any fabric made there-from. Non-textile factories include the following named in Part I, Schedule 6, of the Act : Print works, bleaching and dyeing works, earthenware works, lucifer-match works, percussion-cap works, cartridge works, paper-staining works, fustian-cutting works, blast furnaces, copper mills, iron mills, foundries, metal and indiarubber works, paper mills, glass works, tobacco factories, letterpress-printing works, bookbinding works, flax scutch mills, and electrical stations; also those named in Part I of the same Schedule (hat works, rope works, bakehouses, of the same Schedule (hat works, rope works, bakehouses, lace warehouses, shipbuilding yards, quarries, pit-banks, dry cleaning, carpet-beating, and bottle-washing works) where mechanical power is used in aid of the manufacturing process carried on, and any premises where manual labour is exercised by way of trade or for purposes of gain in making, altering, repairing, ornamenting, finishing or adapting for sale any article if mechanical power is used. Workshops are premises named in Part II of the Schedule (above) which are not factories, and any premises in which manual labour is exercised by way of trade or for gain in making, etc. exercised by way of trade or for gain in making, etc.,

The new powers given to the Secretary of State allow him, if he considers the number and nature of accidents occurring in any factory or class of factories are such as to make special provision necessary, to call on the occupier to make special supervision in regard to safety, investigation of the causes and accidents, or as he may by Örder direct.

SUPPLIERS OF CASES

Most of the well-known surgical sundries houses are in a position to supply first-aid cases conforming in every particular to the Home Office requirements, as recent advertisements in The Chemist and Druggist show.

Ayrton, Saunders & Co., Ltd., Liverpool, in last week's issue pointed out that it is now obligatory for

though one man is employed) to install a first-aid case of definite arrangement and standard capacity. The company urge the chemist to obtain this class of business, and state that they are prepared to supply the cases.

ARTHUR BERTON, LTD., London, Manchester and Glas

gow, draw attention to their first-aid sets, which comply with the Home Office requirements under the Workmen's Compensation Act, 1923. Particulars and prices will be forwarded on application.

BURROUGHS WELLCOME & Co., London, E.C., state that their cases (case A for factories employing 50 persons or less; case B for factories employing 50 to 150 persons)

or less; case B for factories employing 50 to 150 persons) contain more than the legal minimum supplies, so that the factory owner is always "on the safe side."

MATTHEWS & WILSON, LTD., have forwarded for our inspection a sample of their "Fifty" first-aid set. The stout case measures 10 in. by 5½ in. by 4 in., and the lid is closed with a press button. The contents comply with the Home Office requirements for the smaller factories. The company suggest chemists should circularise factory owners and on receipt of a postcard. larise factory owners, and on receipt of a postcard, stating the quantity required, will furnish, free of charge, a suitable leaflet for this purpose.

MAY, ROBERTS & CO., LTD., point out that it is not only the sale of the original case that concerns the chemist, but there is the matter of refills, and for this reason, among others, he should do his utmost to secure the order for the case. Prices will be forwarded on

application. SOUTHALL BROS. & BARCLAY, LTD., in their advertisement in this issue, call attention to the fact that they can supply all that is necessary for the first-aid cases and the refills.

WILLIAM TOGGOOD, LTD., announce that they are in a position to supply the cases as required by the Home Office. Box No. 112 is suitable for where 50 persons or less are employed, and No. 113 for over that number.

Modern Hygene.—"I always wash the comforter in baby's bath to sterilise it," said a customer over the counter in an Essex pharmacy recently. Evidently a regular attendant at the "Welfare."

Oil of Wintergreen By Ernest J. Parry, B.Sc.

OIL of wintergreen (I use the term here as including oil of sweet birch) has up to now been freely admitted into this country without duty. A momentous discovery, which will tend to revolutionise current ideas of biochemistry, has, however, recently been made by a Government Department. A parcel of natural oil of wintergreen recently arriving in London has been held up for duty under the Act, and the following letter was written by the importer to the Secretary of H.M. Customs:—

W. C. & S., 6/10. Five cases "Birchola" oil sweet birch, ex "Tarantia," from New York.

ex "Tarantia," from New York.

Dear Sir,—Upon applying for the above goods at No. 2 warehouse, London dock, we were surprised to find that we could not take delivery as they had been found to contain 99 per cent. methyl salicylate. We bought this as genuine natural oil sweet birch on the makers' guarantee that it was so. We would point out that the natural oil of sweet birch is almost entirely methyl salicylate, and that this is not a synthetic product at all, but the natural oil. We would also joint out that the price of oil sweet birch is three or four times that of the synthetic methyl salicylate, and if this "Birchola," or oil sweet birch, is to be charged with duty under the Key Industries Act we shall be compelled to revise our prices, and we shall lose heavily on this consignment. We trust that this explanation will be sufficient for you to allow us to take delivery of the goods without payment of any Key Industry Duty.

The following is the reply of H.M. Customs:—

The following is the reply of H.M. Customs:-

Gentlemen,—In reply to your letter of the 8th inst, in regard to the charge of Key Industry Duty on a consignment of essential oil of Sweet birch at London Dock, I am directed by the Commissioners of Customs and Excise to inform you that they are advised, as regards oil sweet birch, that it is a listed substance, viz.. mcthyl salicylate, and is manufactured by fermentation processes. In these circumstances they regard the article as liable to Key Industry Duty under Part I of the Safeguarding of Industries Act. Duty under Part I of the Safeguarding of Industries Act.

Frankly I cannot conceive a more ridiculous distortion of language than the allegation that essential oil of birch is "manufactured by fermentation processes." The words of the Act are: "Chemicals manufactured by fermentation processes." Here we have an Act passed with the avowed intention of encouraging British manufactures. We have a natural essential oil which cannot be produced in Great Britain, and a phrase in the Act which to any chemist of even deficient intelligence has a definite meaning. And in spite of this we find the authorities, against all canons of legal interpretation, stretch words into a meaning which is so ridiculous that it is obvious that such meaning is not the meaning of the statute. There can be little doubt that, apart from the obvious absurdity of the matter, such an interpretation could not be supported in law. Because, during the growth of a plant the essential oil is in the form of a glucoside which is then hydrolised by nature under of a glucoside which is then hydronsed by nature under the influence of an enzyme—not a living fermenting organism—we are now told that that essential oil is a "chemical manufactured by fermentation processes." It is quite obvious that this view was never in the minds of those who framed the list of dutiable articles—that is, if anything can be called obvious in connection with the list. For, if one refers to indigo, one finds it specifically listed as indigo (synthetic), thus one finds it specifically listed as indigo (synthetic), thus obviously excluding natural indigo. But natural indigo is the result of glucosidal decomposition, and if such a remarkable view had existed in the minds of those drawa remarkable view had existed in the infines of those drawing up the list, natural indigo would have been in the list. Look, too, at benzaldehyde. This is specifically marked D, which by reference to the remarks at the commencement of the list and the words of the statute is synthetic benzaldehyde. On the present view oil of almonds ought to have been included (see C. & D., November 18, 1922, p. 703). Surely there is someone to advise the Customs that natural oil of sweet birch is not a chemical manufactured by fermentation processes, either within the meaning of the Act or at all. Is it to be imagined that one of the Referees appointed under the Act should be asked, at the expense of some hundreds of pounds, to decide such a question?

Corner for Students Conducted by Leonard Dobbin, Ph.D.

Communications should be addressed "Corner for Students, The Chemist & Druggist,' 42 Cannon St., London, E.C.4."

Report on the December Analytical Exercise

THE powder distributed to students on December 4 contained eight parts by weight of zinc sulphide, one part of zinc phosphate, and one part of zinc acetate. The calculated composition of such a mixture is:—

$\mathbf{Z}\mathbf{n}$	•••					59.4
					•••	
PO ₄	•••	•••	•••	•••	•••	5.9
$C_2H_3O_2$		•••	•••	•••	•••	
H_2O	•••	•••	- ···	•••	•••	3.4
					-	100.0

The powder contained, however, as considerable impurities, sodium, ammonium, and the sulphuric and hydrochloric acid radicals; also a recognisable trace of iron.

Samples of the powder were distributed to eighty-three students and fifty-five reports were returned for examina-tion. The writers of all these reports detected the zinc, but three failed to detect the sulphide, while the phosphate was missed in fourteen and the acetate in no fewer than forty-eight cases. As regards the more noteworthy impurities, the failures in their detection were: Sodium, 4; ammonium, 31; sulphate, 38; chloride, 22. The small proportion of water evolved when the powder was gently

heated was overlooked by thirty-six students.

The analysis in the case of this mixture was slightly more difficult than in that of the November exercise, the detection of the acetate and of the several radicals present as impurities, in particular, necessitating careful and attentive treatment. The usual preliminary tests enabled most students to approach the systematic analysis with the knowledge that zinc, a sulphide, and a phosphate were certainly present as main constituents, although the fullest advantage of this important knowledge was not invariably taken in the subsequent

Since many of the remarks on their analyses which might, on this occasion, have been addressed to individual students would necessarily have related to the same subjects, it has been considered preferable, in what follows, to deal with the subjects more fully than usual in the general remarks and correspondingly to reduce the number of the separate replies to correspondents. Students generally are recommended to study these general remarks, as the analysis to which they refer possesses a number of particularly instructive features.

In the preliminary heating of the powder in an ignition tube sulphur dioxide was evolved, owing to the ready oxidation of the zinc sulphide, and this frequently led to a sulphite being suspected, and sometimes to its being reported present without any confirmatory test having been applied.

On treating the powder with cold dilute hydrochloric acid, in preparing the solution to be tested for metals, hydrogen sulphide was evolved abundantly, but there was no change of colour due to the formation of copperor arsenic-group sulphides; and, as an almost clear solution was obtained on gentle heating, the absence of metals precipitated by hydrogen sulphide in acid solution might be inferred. This observation was commented when and the correct inference was drawn from it by upon and the correct inference was drawn from it by a single student, who omitted the needless formality passing hydrogen sulphide through the solution. It is to be noted that this solution was not perfectly clear, since it contained, in suspension, a trace of free sulphur derived from the zinc sulphide. Had its turbidity been due, as some students supposed, to lead chloride, the formation of black lead sulphide would have occurred during the solution of the powder in hydrochloric acid, and could scarcely have escaped observation.

The exercise presented the somewhat unfamiliar case of a phosphate mixture which did not require the applica-

tion of a special method to eliminate the phosphoric acid radical, since it did not contain any of the metals which yield phosphates insoluble on addition of ammonium chloride and sufficient excess of animonium hydroxide. Zinc phosphate is soluble in the latter reagent, and those students who added it in sufficient quantity, after adding ammonium chloride, obtained a clear solution from which it was only necessary to precipitate the zinc as sulphide and then to examine the filtrate for alkali metals. The majority, however, failed to ascertain whether or not the precipitate first formed on adding ammonia to the original hydrochloric acid solution dissolved in excess of the reagent, and simply proceeded to carry out an unnecessary phosphoric acid separation by the acetate method.

The presence of magnesium was very commonly reported. The reaction with sodium or ammonium phosphate, which led to this, was most likely due to traces of zinc remaining in the filtrate from the zinc sulphide. Precipitates-attributed to aluminium were also, in all

probability, due to zinc.

The failures in the detection of the acetic acid radical were exceptionally numerous. In a great many cases no test for an acetate was applied, and in various instances when a test was applied no characteristic reaction was observed. The present analysis provided a case in which the separate examination of an aqueous extract was of real service, since this extract contained the zinc acetate, and a nearly neutral solution of ferric chloride gave with it distinctly the characteristic red coloration due to ferric acetate. Most solutions of ferric chloride are too strongly acid to be employed as a delicate test for an acetate, and should be made almost neutral by adding as much ammonia as can be added without producing a permanent precipitate.

In the reports upon the testing of the sodium carbonate

extract for acid radicals, it occasionally happened that supposed reactions were included—with silver nitrate, with ferric chloride and ammonia, or with some other reagent—which purported to prove the presence of a sulphide. The sodium carbonate extract did not, however, contain any sulphide, since the zinc sulphide was not decomposed in its preparation, and the reactions reported could not, therefore, take place. As has been observed in this column before, much knowledge and circumspection are required in order to set down correctly the possible results of experiments which have not

actually been tried.

The ready detection of the ammonium and of the sulphuric and hydrochloric acid radicals did not require more than ordinarily careful procedure, and the numerous failures merely indicate the need for a higher degree of attention to the usual precautions which have so often been emphasised here.

The chlorine water and bromine water used in testing for a sulphite, by oxidising the latter to a sulphate in presence of barium chloride, often contain traces of free sulphuric acid which vitiate the test by yielding barium sulphate with the barium chloride. These reagents should therefore be tested before use, to prove the absence from them of the sulphuric acid radical.

PRIZES

The First Prize for the best analysis has been awarded

L. G. MEACHIM, 22 Crowstones, Buxton.

The Second Prize has been awarded to :-

Douglas Harvey, 7 Hector Road, Slade Lane, Longsight, Manchester.

First Prize.—Any scientific book that is published at a price not greatly exceeding fifteen shillings may be taken as a first prize.

Second Prize -Any scientific book which is sold for about seven shillings and sixpence may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book or books they select.

MARKS AWARDED FOR ANALYSIS

L. G. Meac	him	(1st		Nick-o'-time	 	74
Prize)			95	Potassium	 	74
D. Harvey (2			92	Staphisagriae	•••	74
Radio			88	A. C	 	73
M. Glennie			87	Kurroa	 	73
A. Prescott			86	Kiphil	 	71
			86	R. F. S.	 	71
NH ₃			86	X	 	71
Terra Nova			86	C.—T. W.	 • • •	70
C. W			82	Milton	 	69
Hothersall			82	Etna	 	67
Datura Fastu	osa		81	К. Т	 	66
Désormais			81	Student	 	66
Dope			81	Long'un	 	65
H. Nelson			81	M.P. SO ₂	 	63
Pipette			81	Napier	 	61
Aspidosperma			80	Nasmint	 	60
Minster			80	Ad lib	 	58
A. A. W.			79	Moi	 	58
Douglas			78	Lancaster	 	57
Pengwerne			78	Nepenthe	 	52
Cato			77	Syphon	 	52
J. H. S.			77	Oculus	 	49
E. H. B.			76	Ichabod	 	48
Ikanopit			76	Decside	 	47
NaCl			76	Tout-Prêt	 	46
Désirée			75	Cæsar	 	36
Holme			74	Novice	 	27

To Correspondents

PIPETTE.—Your report is self-contradictory with respect to a supposed sulphide reaction, inasmuch as you describe a solution acidified with nitric acid as vielding a black precipitate, soluble in nitric acid. You do not state how the solution acidified with nitric acid was prepared, but assuming that it did give a black precipitate of silver sulphide, this precipitate would not dissolve in cold dilute nitric acid.

ASPIDOSPERMA.—In testing for sulphur acids, the faint precipitate you got with barium chloride was due to the sulphuric acid radical present in small proportion as impurity. The slight indication that you observed of the presence of an acetate would doubtless have been more distinct had you employed a nearly neutralised solution of ferric chloride; see the general remarks,

Douglas, R. S. F., and X.—You were too easily satisfied that the milkiness of the original hydrochloric acid solution on cooling was due to lead chloride. Had lead been present the powder would have darkened at once when treated with hydrochloric acid, owing to the hydrogen sulphide liberated from the zinc sulphide interacting to form lead sulphide.

CATO.—In reporting the reactions for acidic radicals you omitted to describe how you prepared the neutral solution to which the various reagents were added. This information should always be given in detail, since it is impossible in its absence to judge of the accuracy of the reactions that are reported.

E. H. B.—You have omitted to report any tests applied for the detection of the barium group, magnesium, and potassium. Separate portions of the same solution could not yield with silver nitrate a yellow precipitate of silver phosphate and with lead acetate a black precipitate of Doubtless you will recall that they lead sulphide. did not do so.

Désirée.—Nitrate was not present. The appearance which led you to conclude that it was present was, no doubt, that of the interface between the lighter and the denser of the two layers of liquid in the test-tube.

A. C.—Hydrochloric acid alone, in absence of boric acid, colours turmeric paper slightly pink on drying, but this pink is not turned to green by alkalies. Read also the raply to "Douglas."

C.—T. W.—Borate was not present. In any future

reports, add a summary of the constituents detected.

MILTON.—Sodium nitroprusside could not give the characteristic violet coloration with the sodium carbonate extract since this did not contain any sulphide.

peculiar odour you observed when testing the powder for a borate by means of concentrated sulphuric acid and alcohol was most probably due to the interaction of liberated acetic acid and hydrogen sulphide.

K. T.—In the soda-lime test for ammonia the mixture should not be moistened merely with water, but with a concentrated solution of potassium hydroxide (10 grams in 10 c.c. water) in which ammonia is only sparingly soluble. Your ammonium molybdate solution requires attention, or your mode of using it is faulty.

M.P. SO₂.—Note that the precipitate of zinc ferrocyanide is white—not blue.

ICHABOD.—If your report correctly records your procedure, you wasted six filters in filtering when there

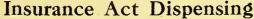
was no precipitate to separate.

Deeside.—The quantity of powder supplied is made small intentionally, with a view to enforcing careful small-scale working. You wasted some of your material in making a quantitative determination of zinc.

Retail Pharmacists' Union

Birmingham.—The Birmingham branch held a meeting at the Imperial Hotel on January 2 to discuss Profits on proprietaries, recent reductions and revision of terms. Mr. H. H. Marshall had been invited to introduce the subject, and the chair was taken by Mr. J. T. Bell. Mr. Marshall first stated that he desired to give his personal views on this important subject. He drew their attention to the conditions of trading at the inception of the Proprietary Articles Trade Association nearly thirty years ago. To-day the chemist is faced with a smaller turnover and the prospect of reduced profits by the recent action of certain manufacturers, whilst his overhead expenses remained at practically the highest figure in the history of the trade. If these conditions were allowed to go unchallenged other manufacturers would follow suit, and it would mean further reductions by these who had already commenced to cut down their legitimate Almost every alteration of terms and quantity discounts had sconer or later been attended by further curtailment of profit. He gave facts and figures in connection with the recent revision of prices, showing that by an acceptance of the first reduction, viz., that of a largely-advertised soap, some twelve months ago. other firms had followed in the same footsteps, with adverse results to the trade. In no instance could any guarantee be obtained from these firms that even the present rate of profit would be maintained, and the small number of chemists throughout the country who had protested against these conditions had encouraged them in their action. According to a schedule issued by a well-known company giving the expenses of the general retail trades of the country, the chemist's overhead charges were placed at from 22 per cent. to 25 per cent. of the turnover, and yet many firms were offering profits of from 17 per cent. to 20 per cent. on some of the best selling articles. There was a danger that many proprietaries in the future would give a profit only equal to that which was received by grocers to-day. If chemists are dissatisfied they should protest to the manufacturers and to the R.P.U. (or to the P.A.T.A. The meeting was then opened for discussion, and Mr. Tranmer (member of the R.P.U. Executive) was invited to speak. Mr. Tranmer stated that he agreed with Mr. Marshall, but it was difficult to handle these subjects at the Executive meetings unless protests were sent up by either individuals or the local branches. The following resolution was passed unanimously, and the secretary was instructed to forward to the secretaries of the R.P.U. Executive and the P.A.T.A. Council:—

That this meeting of Birmingham Retail Chemists protests That this meeting of Birmingham Retail Chemists protests against the new terms which are being offered by certain large manufacturers of toilet articles. The meeting considers that, having regard to the high overhead costs of conducting a chemist's business, this is not an opportune time to reduce percentage profits, or to increase the size of parcels beyond the convenient purchasing power of the average chemist. The meeting requests that the Council of the P.A.T.A. and the Executive Committee of the R.P.U. take immediate steps to further the interests of retail chemists in this matter.



Record of matters concerning Chemists' interests in the National Health insurance Acts.

Local Reports ENGLAND AND WALES

Sheffield .- At a recent meeting, the Insurance Committee refused the alteration of hours in individual cases without the hours of the whole service being dealt with. The chemists' accounts for December amounted to \$1,531 11s. 11d., and medical practitioners received \$224 9s. 5d. for emergency dispensing during 1923. The secretary of the Pharmaceutical Committee has issued a circular on the supply of appliances and the use of methylated spirit in medicinal preparations.

Inquiry about a Medical Practitioner

THE Minister of Health has considered the report made by an Inquiry Committee, on a representation made by the Liverpool Insurance Committee, to inquire into the case of Dr. Robert Reid Rentoul, of 78 Hartington Road, Liverpool, and being satisfied that Dr. Rentoul's continuance on the Medical List would be prejudicial to the efficiency of the medical service, has removed Dr. Rentoul's name from the medical list for the area from January 15, 1924. The costs of the inquiry will be paid by Dr. Rentoul. The representation of the Insurance That Dr. Rentoul has improperly demanded and/or accepted fees for services rendered to insured persons. That he had given prescriptions on the official form to an insured person not included in his list. an insured person not included in his list.

SCOTLAND

Fife.—At a meeting of the Insurance Committee, held recently, the clerk stated that in all probability the balance of £856 17s. 9d. remaining in the hands of the Committee would be insufficient to meet the Chemists' Accounts for October, November, and December, and the balance of the capitation fees payable to dispensing doctors, but that the Committee are entitled to claim on the central drug pool for any deficiency which might arise.

Trade-marks Applied for

The figures in parentheses refer to the classes in which the marks are grouped. A list of classes and particulars as to registration are given in "The Chemist and Druggist Diary," 1924, p. 289.

(From "The Trade-marks Journal," December 26, 1923.)

(From "The Trade-marks Journal," December 26, 1923.)

"URADUM"; for medicinal chemicals (3). By P. S. Constable, 24 Aycliffe Road, Shepherd's Bush, London, W.12. 442,481.

"NAYTROX"; for medicinal chemicals (3). By Suggett & Smith, Front Street, Coxhoe, co. Durham. 442,481.

Label device including reproductions of medals and facsimile signature, "W. J. Bush & Co."; for essences (42). By W. J. Bush & Co., Ltd., 28 Ash Grove, Hackney, London, E.8. B 439,250.

"Labo the Labour Saver" on triangular device; for a lavatory bowl cleanser (47). By MacBryde & Stevenson, 163 Borough High Street, London, S.E.1. 441,792.

"Scott's Mineralaya, Nature's Beautifier," with circular device, including girl's head and cherubs ("Scott's"

device, including girl's head and cherubs ("Scott's" and head device disclaimed); for face lotion, vanishing cream and face powder (48). By Scott's Preparations, Incorporated, 251 West 19th Street, New York, U.S.A.

LEICHNER" facsimile signature: for perfumery, etc. 48). By L. Leichner. 31 Schützenstrasse, Berlin, (48). By L. Leichner. 31 Schützenstrasse, Berlin, S.W.68, Germany. 441,526.

"HAIRGEN"; for hair preparations (43). By Colmans, Ltd., 161 Bury New Road, Manchester. 442,191.

"MAGNUM"; for toilet brushes (50). By H. Thompson & Son, 99 Bland Street, Manchester, S.W. 431,939.

(From "The Trade-marks Journal," January 2, 1924-)

"DAFFODIL BRAND" with picture of daffodil on circle; for chemicals (1). By J. Nicholson & Sons, Ltd., Church Street, Hunslet, Leeds. 441,447. (Associated.)

"LICIDE"; for vermin destroyers (2). By T. Tyrer & Co., Ltd., Canning Road, Stratford, London, E.15. 439,190. "HYRECO" in circular device; for chemicals (2) and for all goods (47). By Hygienic Research Co., Ltd., 100-106 Moorgate Station Chambers, London, E.C.2. 442,124/125. (Associated.)

Moorgate Station Chambers, London, E.C.2. 442,124/125. (Associated.)

"GOLD MOHUR BALM" on label, with device of Indian wearing turban bearing word "Pucka" ("Pucka" and "Gold Mohur" disclaimed); for an Indian native medicine (3). By W. M. Maynard, Broomrigg Road, Fleet, Hampshire. 425,925. (Associated.)

"Torbet Lactic Oats"; for a medicated oat preparation (3). By Torbet Lactic Oat Co., Ltd., 31 St. Andrew Square, Edinburgh. 431,136.

"Tetavon"; for all goods (3). By Société Anonyme Anciennement B. Siegfried. Brühlen 830. Zofingen, Aargovia, Switzerland. 440,776. (Associated.)

"Tabelchers" with device of lotter T on diamond shape ("T" disclaimed); for dyspepsia tablets (3). By Pearson Bros., 29a Savile Row, London, W.1. 441,396.

"Danizek Embrocation"; for an embrocation (3). By J. Robinson, 13 Partridge Street, Bolton. 441,979.

"Thermoid"; for medicated socks (3). By Cusson, Gerrard & Co., Ltd., 26 Fountain Lane, Oldbury. 442,792.

"Salutene"; for medicinal chemicals (3). By F. W. Hampshire & Co., Ltd., Silk Mill Lane, Derby. 443,038.

"Illingworth's Projector Bromide Paper" with device, including horseshoe surrounding letters T.I.C. ("Illingworth's," "Projector" and "T.I.C." disclaimed); for photographic paper (39). By T. Illingworth & Co., Ltd., Cumberland Avenue, Park Royal, Willesden Junction, London, N.W.10. 441,778. (Associated.)

"Bird's Lemonade Crystals" with device of lemon and hand holding glass (Fruit device disclaimed); for a lemonade preparation (42). By A. Bird & Sons, Ltd., High Street, Deritend, Birmingham. 436,145. (Associated.)

"Pa-Pa-Bi"; for all goods (48). By M. & R. Neville,

right Street, Deritend, Birmingham. 430,143. (Associated.)

"PA-Pa-Bi"; for all goods (48). By M. & R. Neville, 25 Hamilton Road, Ealing, London, W.5. 432.743.

"PRAEMER"; for a hair preparation (48). By J. McFarlane, 49 Old Sneddon, Paisley, Scotland. 441,538.

"ENOLIN MAGNESIA TOOTH PASTE": for magnesia tooth paste (48). By Enolin, Ltd., 147-149 Great Portland Street, London, W.1. 442,764. (Associated.)

(From "The Trade-marks Journal," January 9, 1924.)

"Brustane"; for all goods (1). By Goodlass, Wall & Co., Ltd., 42/44 Seel Street, Liverpool. 443,001.
"Durmat"; for chemicals (1). By Champion, Druce & Co., 6 Laurence Pountney Hill, Cannon Street, London,

6 Laurence Pountney Hill, Califold Science, Edition, E.C.4. 443,109.

"Charnite": for medicinal vegetable charcoal for poultry (2). By S. & B. Nightingale, Ltd., Albert Street, Oldbury, Birmingham. 432,440.

"ELSANOL": for disinfectants (2). By The Elsan Manufacturing Co., 91 Tabernacle Street, Finsbury, London, E.C.2. 440,325.

E.C.2. 440,325.

"Leecyl"; for all goods (2). By L. A. Lee, 12 Camonulo Street, London, E.C.3. 442,204. (Associated.)

"Monastery Ointment"; for ointment (3). By E. Clements, Marsh View, Lessingham, Norwich. 431,661.

"Monastery Ointment"; for ointment (3). By E. Clements, Marsh View, Lessingham, Norwich. 431,661. (As oriated.)

"Melto"; for a chemical cream for use in obesity (3). By Blanche K. Hartzell. 1,448 Ohio Avenue, Youngstown, Mahoning. Ohio, U.S.A. 437,413.

"Dyspeptine"; for medicinal chemicals (3). By Société Anonyme Laboratoire de Physiologie du Puits d'Angle, Puits d'Angle, near Le Chesnay, Seine et Oise, France. 441,397.

"Nuhed"; for medicinal preparations (3). By Kate Smith, 70 Walter Road, Swansea. 442,311.

"Duploferrin"; for medicinal chemicals (3). By J. A. Wulfing, 231 Friedrichstrasse, Berlin. 442,332.

"Andrews Liver Salt" on label device; for liver salt (3). By Scott & Turner, Ltd.. 4 Gallowgate, Newcastle-on-Tyne. 441,603. (Associated.)

"Astorelli"; for goods (3). By Astor Boisselier & Lawrence, St. Dunstan's Buildings, St. Dunstan's Hill, London, E.C.3. 442,770.

"Tinker-Tape"; for adhesive tape for surgical purposes, etc. (11). By E. "Taylor, Ltd., 3 Islington Square, Salford, Lancashire. 442,237.

"Osoapo" over device of vase bearing word "soap"; for soap (47 and 43). By J. Bibby & Sons, Ltd., King Edward Street, Liverpool. 441,935/986. (Associated.)

"Kalapi"; for perfumery, etc. (43). By Madhanji V. Thacker, Star Works, St. Mary Crav. Kent. 432 031.

"Ido-Nto-NKYE"; for all goods (43). By R. and M. Neville, 25 Hamilton Road, Ealing, London, W.5. 432,747.

Trade Report

42 Cannon Street, E.C.4, January 10.

ALTHOUGH stocktaking operations are not yet concluded, there are signs of a pending general improvement in demand in the chemical and drug trades, and should the political situation be more clearly defined the feeling of apprehension lately existing is likely to be displaced by a return to confidence. Crude drugs show few important changes. Cascara sagrada is quite firm, and the recent weakness in senega seems to have disappeared. Sandarac is dearer and has sold more freely appeared. Sandarac is dearer, and has sold more freely. Matto Grosso ipecacuanha is tending firmer, with December deliveries amounting to 122 bales. Hydrastis and mandrake root are also firm, the former showing a further advance at the source. Balsam tolu, Japanese slab camphor and cassia fistula are easier. Menthol is dearer, mostly as the result of operators covering in forward shipments, Japan taking advantage of the situation to raise prices; dementholised mint oil has sold freely to Germany. Among pharmaceutical chemicals little change Germany. Among pharmaceutical chemicals little change is recorded. Acetanilide remains in short supply and bromide salts continue firm. Calcium lactate is rather cheaper; citric acid is dull and weak. Hydroquinone and methyl sulphonal are a shade easier. Sodium salicylate is firm, with plenty of inquiry, but other salicylates are easier in sympathy with phenol. Imports of fine chemicals from Germany have practically ceased owing to the reparation trouble, which we refer to in more detail (n. 68). Among industrial chemicals are early more detail (p. 68). Among industrial chemicals an early revival in demand is expected, and the outlook is considered promising. There is little change in values to report. Acetate of lead shows a further slight advance; caustic potash is weaker and sodium sulphide rather dearer. Carbolic acid crystals are again cheaper.

Higher	Firmer	Easler	Lower
Arrowroot Camphoric acid Cinnamon chips Cottonseed oil Ipecacuanha (Matto Grosso) Linseed oil Maize starch powder Menthol Mint oil Soya oil Turpentine	Canary seed (Mazagan) Cassia oil Creosote oil Lead acetate Lemongrass oil Lime oil Lubricating oils Sicilian oils Sodium sutphide Spike oil (Sp.)	salicylate	Acid oils Ammon. benzoate Calcium lactate Carbolic acid erystals

Exchange Rates on London

The following is a list of Continental and other exchange rates against the pound sterling on London prevailing at 4 p.m. on Wednesday :-

Place	Method of Quoting	Par of Ex- change	January 2	January 9
Amsterdam Berlin Brussels Calcutta Christiania Constntnple Greece Italy Kobe Lisbon Madrid Montreal New York Paris Singapore Switzerland Vienna	FI. to £ M to £ Fr. to £ Per rup. Kr. to £ Pst. to £ Dr. 50 £ Lire to £ Per yen Escu. Pts. to £ \$ to £ \$ to £ Fr. to £ Per dol. Fr. to £ Kr. to £	12,107 20,43 25,22½ 24d, 110,25,22½ 25,22½ 25,22½ 4,86% 4,86% 4,86% 25,22½ 4,86% 25,22½ 25,22½ 25,22½ 24,0%	11.35\frac{1}{4}-11.35\frac{1}{4} 18-20 billions* 96.70—96.80 17\frac{1}{3}\ddotd17\ddotd. 29.92—29.94 8055-820 210—215 99\frac{1}{4}-25\frac{1}{4}\ddotd. 1\frac{2}{3}\ddotd25\frac{1}{4}\ddotd. 1\frac{2}{3}\ddotd25\frac{1}{4}\ddotd. 4.28\frac{1}{4}-29\frac{1}{4}. 85.80-85.85 28\frac{1}{4}\ddotd28\frac{1}{3}\ddotd. 24.68-24.70 304.000-308,000	11.401—11.41 18-20 billions* 99.50—99.60 17.3d. 17.3d. 29.75—29.80 795-815 223—228 991—991 251.—25.4d. 111.4d.—17d. 33.57—33.59 4.401—4.41 4.291—4.291 87.55—87.65 281d.—283d. 24.70—24.72

* Nominal.

Cablegram

New YORK, January 9.—Business is fair. Menthol has advanced 65c. per lb. to \$12.00. Hydrastis (golden seal) is also dearer at \$3.60, and taraxacum root has advanced to 30c. per lb. Cartagena ipecacuanha is lower at \$2.15.

Balsam Canada is also cheaper at \$12.80 per U.S. gallon, and Oregon balsam of fir has declined to \$1.65 per U.S. gallon.

Revue des Marchés

Sommaire des principaux mouvements des prix des drogues, essences, produits chimiques et pharmaceutiques sur le marché de Londres.

Abréviations d'usage employées pour indiquer les mesures de poids et de capacité:—Ton = 1016 kg.; Cwt.=50,8 kg.; lb.=453 gr.; oz.=28,34; Gal.=4546 c.c.

Le baume de Tolu est maintenant plus abondant par suite des arrivages à Londres, et les cours s'en ressentent. Le recenthol et l'essence de menthe démentholisée japonaise sont con hausse, car les spéculateurs qui ont vendu embarquement janvier/mars sans couverture sont obligés d'acheter pour etre à même de faire honneur à leurs engagements. En produits pharmaceutiques rien à signaler; cependant, on constate une tendance à la hausse dans les derniers cours cotés par les exportateurs français et allemands. L'acide citrique est lourde et en tendance faible, Quoque les fabricants anglais de crème de tartre affirment qu'ils ne peuvent vendre qu'avec perte aux cours tenus actuel-Quoque les fabricants anglais de crème de tartre affirment qu'ils ne peuvent vendre qu'avec perte aux cours tenus actuel-lement, et qu'il faut s'attendre sous peu à un raffermissement des prix, on constate que les détenteurs de stocks, surtout de crème de tartre de provenance française et italienne, s'intéressent pour des offres même quelque peu au-dessous du dernier cours. L'acide tartrique est en forte demande pour l'exportation. On s'attend à une reprise des affaires sur le marché des produits chimiques industriels, et dans l'ensemble la situation paraît assez favorable. Les fabricants anglais annoncent une baisse de 15s. par tonne sur leur prix pour le carbonate de sodium (soda ash 58 p. 100), et de 5s. par tonne sur celui du chlorure de chaux. Le cours de l'acide phénique cristallisée a subi de nouveau une baisse.

Crude Drugs, etc.

Aconite Root is in better supply, the value of Japanese being from 75s. to 80s., and Indian probably about 85s. per cwt.

Aloes.—The exports from the Union of South Africa during September amounted to 125,133 lb. (£1,125), against 62,093 lb. (£350) in September 1922. During the nine months ended September 30 the exports were 607,418 lb. (£4,552), against 432,876 lb. (£2,833) for the corresponding period of 1922.

Annatto Seed.—Sellers quote Jamaica for March ship-

Annatto seed .- Sellers quote Jamaica for March shipment at 1s. 5d. per lb. c.i.f. London, and for Madras 1s. c.i.f. has been paid; good Madras on the spot is worth about 1s. 6d.; 50 bags have arrived from Jamaica and 14 from Java.

ANTIMONY.—American reports are strong on the continuation of restricted offers and the difficulty of placing orders, further inquiries having come forward for Chinese regulus, which is firmly held ex stock at £36 per ton. English high-purity brands stand at £33 10s.

Arrowroot is dearer, fair to good manufacturing St. Vincent offering at from 63d. to 71d., and grocery at 74d. per lb.

Balsam Peru.—Genuine B.P. can be had at 8s. 3d. per

lb. on the spot.

BALSAM TOLU.—The arrivals, which have been more free of late, include 10 cases from New York; spot can be had at 10s. 6d. per lb.

BISMUTH.—We note the arrival of 55,318 lb. metal

BUCHU.—The exports from the Union of South Africa during September amounted to 15,540 lb. (£1,819), against 2,973 lb. (£388) in September 1922. During the nine months ended September 30 the exports were 157,205 lb. (£19,540), against 117,142 lb. (£14,621) for the corresponding period of 1922.

CADMIUM.—A moderate business has been done but

CADMIUM.—A moderate business has been done, but with the ample supplies coming forward recent quotations

with the ample supplies coming forward recent quotations are quietly steady, varying from about 2s. 6d. up to 3s. per lb., according to degree of purity.

CALUMBA.—The London stock has declined to 9,055 bags, against 14,274 last year; 103 bags were delivered in December, there being no landings.

CAMPHOR (REFINED), Japanese 2½-lb. slabs continues dull of sale at 3s. 8d. per lb. on the spot, and for November-December shipment 3s. 5d. c.i.f. is quoted. The landings in London during December amounted to The landings in London during December amounted to

1,005 packages and the deliveries to 602, leaving a stock of 2,587 packages, against 1,329 in 1922. A year ago (says an Osaka correspondent) trade was brisk and large quantities were being exported. The demand has radually fallen off since, and exportation is limited in volume. The slack business is attributed to large floating stocks in the United States market and competition

Trom artificial and Chinese camphors.

CANTHARIDES.—Chinese on the spot are quoted at

4s. 8d. per lb., and a recent c.i.f. price was 4s. 4½d.

CASCARA SAGRADA remains firm on the spot, new peel offering at 125s. per cwt., possibly 120s.; a good business was done early in the week in three-year-old bark at 130s., with 135s coked. The landing in London during with 135s. asked. The landings in London during December amounted to 37 tons, and the deliveries to 21 tons, leaving a stock at the end of December of 32 tons, against 27 tons in 1922.

Cassia fistula can be had at 40s, per cwt. for good

sound quality.

CINCHONA.—At the auction to be held in Amsterdam on January 16, 963 bales and 134 cases of Java pharmaceutical bark, consisting exclusively of Cinchona succirubra, will be offered for sale; the total weight amounts to 54,567 kilos, representing a content equivalent to 1,327 kilos of quinine sulphate.

CINNAMON.—Chips are 1d. per lb. higher at 23d. per lb. CLOVES.—Zanzibar continue quiet at from 1s. 4d. to 1s. 5d. per lb. on the spot. To arrive, the value of January-March shipment, 1s. 3½d. per lb. c.i.f. The weekly wharf statistics show 4.123 bales landed and 461 delivered, leaving a stock of 23,039 bales, against 1,580 bales in 1922 and 5 350 bales in 1921,

Cod Liver oil .- Our Bergen correspondent writes on January 7 that the market has been without interest for the last fortnight. The stock is very limited, and the quotation is nominal at 100s, to 102s, per barrel c.i.f. London for finest non-freezing quality. The new cod-fishing will probably commence about the end of January as usual.

CONDURANGO .- All the cheap parcels appear to have been disposed of, and 8d. per lb. is now wanted.

Dragon's BLOOD.—Good quality is still very scarce, with no reboiled obtainable. Slab varies in price from £20 to £22 per cwt. as to quality and holder. Good thin · reed is also scarce, and for several cases of thick £19 to £20 is wanted. The landings in London during December were 41, and the deliveries 23, leaving a stock of 109 against 84 cases in 1922.

ERGOT.—Seventy bags have arrived from Hamburg per "Desdemona." The spot value of good sound Spanish is about 1s, 3d, per lb.

GINGER is firm and in more inquiry. Japanese is held for 90s., and forward business has been done at 80s. c.i.f. Fair plump natural Cochin is 92s. 6d. and scraggy 90s. Calicut is 90s. to 85s. as to quality. African is scarce, Jamaica is unchanged at 150s. to 190s. per cwt. for small to bold.

The exports of ginger from Sierra Leone during the ninemonth period (January to September, 1923) were 27,837 ewt., against 26,605 ewt. for the whole of the previous year, or

1,232 cwt. more.

HYDRASTIS is firm at 17s. 3d. per lb. on the spot. New York reports an advance to \$3.60.

during IPECACUANHA.—The deliveries December amounted to 122 packages Matto Grosso and 2 East Indian, the only landings during the month being three of the latter description. The stock of Matto Grosso at the end of December was 224 (against 198 in 1922), other descriptions being 16 bales only. After business had been done in Matto Grosso at from 7s. 1½d. to 7s. 3d. further offers were withdrawn. The price cabled for East Indian from Singapore is 7s. 6d. c.i.f.

KOLA.—The exports from Sierra Leone for the nine-month period (January to September 1923) amounted to

1,917 tons, or about the same as for the whole of 1922.

Menthol.—The market is described as very "touchy" at the moment, and with more inquiry sellers on Wednesday were asking 62s. 6d., though probably slightly less would have been accepted for the usual spot brands. To arrive October-December shipment has been sold at

47s. 6d. c.i.f., and January-March shipment at from 44s. to 46s. per lb. c.i.f., with 48s. 6d. asked on Wednesday. The advance is said to be due to London operators covering in their January-March shipments, which fact was immediately cabled to Japan and taken

advantage of by that country.

MERCURY.—The position has continued unchanged, although there has been a little more doing for the home Quotations at below £9 15s. per bottle and occasionally at a triffe above have been heard of, which price is the nearest at which business is being done on the spot. Moderate quantities are reported offering from Italy, and it is reported that that country has done business direct with India on the basis of about £9 7s. 6d. c.i.f. net. Old Austria is also offering parcels to this market on a small scale. The quotation ex Spanish mines, which is understood to be net, has remained at 300 pesetas. Advices state that the production of the Almaden mines for the past year to the end of September was 23,585 bottles, operations at the mines having experienced a notable contraction over the summer, which thus caused old stocks at the mines to be reduced to about 8,500 bottles by the end of that month, while the total sales effected during the nine months were 43,942 bottles. The arrivals in London comprise 5,635 lb. from Spain.

Nux vomica is steady.—Cochin on c.i.f. terms is offered at 15s. 3d. to 15s. 6d. per cwt., and Madras for January-March shipment at 15s. to 15s. 3d. per cwt. c.i.f.

OLIBANUM is slow of sale, with good bright drop offering at about 90s. and siftings at 65s. per cwt.

OPIUM.—Very little business has been transacted on the primary markets since the opening of the year, and the same applies to the London market. The last Turkey quotation for 11_2 per cent, was nominally 26s. to 27s, per lb. c.i.f., and the London spot value for 11_2 per cent. is about 31s. per lb

In his report on the Industrial and Economic Situation in Greece, Mr. R. F. Duke, Commercial Secretary at the British Legation in Athens, calls attention to the fact that British Legation in Athens, calls attention to the fact that the quality of Macedonian opium is excellent on account of the superior dexterity of the labourers engaged in its collection. In making incisions in the poppy head, especial care is taken to avoid cutting beyond the latex into the debris of the pericarp. As a result the Macedonian opium has a fine, light and delicate paste and is remarkably right in morphine—15 to 20 per cent. Anatolian opium usually carries from 9 to 14 per cent. Of morphine, The producing districts in Macedonia are:—Veles, Cavalar, Koumano, Istip, Radovitch, Perleps, Strumista in Serbia, 64 per cent, Petrich in Bulgaria, 8 per cent. Kilkis, Serres, Langada in Greece, 8 per cent. The opium crop in 1922 yielded about 500 cases of 150 lb., whilst an average crop yields 1,000 cases. 1,000 cases.

PEPPER has been quieter this week, sellers quoting fair black Singapore on the spot at 4\frac{1}{2}d, per lb. To arrive, January-March and March-May shipment is offered at 4\frac{3}{4}d. c.i.f. London. Lampong is 4\frac{3}{4}d., fair Tellicherry 4\frac{3}{4}d., and Alleppy 4\frac{1}{2}d. per lb. White Muntok is 7\frac{1}{4}d., and sales to arrive include January-March at 7d., also February-April at 7 d. c.i.f.

PIMENTO continues firm but quiet at 2½d. per lb. on

the spot. PODOPHYLLUM ROOT remains very firm, the spot value

being about 115s. per cwt., and 112s. 6d. c.i.f. to arrive, RUBBER.—After spot business was done at 1s. 25d. the market assumed a quieter tone. During the past week \$ fair number of orders have arrived from America, and although many of the orders were below the London parity at least 1,000 tons were sold. The news from Singapore, combined with the fall in sterling, has attracted American dealers, and in several quarters higher prices are expected to rule towards the end of the month. In any case holders of spot rubber may look for a fewer maylet to rule towards the spring but tops for a firmer market to rule towards the spring, but the rise will be a very slow one in view of the continued heavy shipments from Ceylon and Singapore. Last week deliveries were very satisfactory, and resulted in a drop of 400 tons in the London stocks. A further substantial drop will be recorded next week, as in addition to the usual deliveries, over 1,000 tons have been destroyed in the big fire at Concordia Wharf earlier in the week, Quotations (Wednesday, 5 p.m.):—No. 1 standard crêpe

and ribbed smoked sheet, spot and January, 1s. 2½d.; February, 1s. 2½d.; March, 1s. 2½d.; April-June, 1s. 2½d. SANDRAC.—A good business has been done, between 150 and 200 packages having been disposed of since last. Friday, and for No. 1, 105s. per cwt. has been paid, with very little of this grade now offering, and possibly 107s. 6d. would have to be paid. To arrive from Morocco 110s. c.i.f. is quoted.

SARSAPARILLA.—Grey Jamaica is in fair supply and easy at 2s. 4d. per lb. for good fibrous; Lima-Jamaica is quoted at 2s.; good red native Jamaica is held for 1s. 10d.; mixed red and yellow has been sold at 1s. 8d., and pale yellow at 1s. 6d. per lb. Mexican is 1s. 8d. per lb. The landings in London during December were 23 and the deliveries 42 bales, leaving a stock of 230, against 133 in 1922.

SEEDS.—Market generally is quiet. Spanish anise, 75s. to 80s., and Russian, 62s. 6d.; Canary seed has shown a fair business in Mazagan at prices ranging from 21s. 9d to 22s. 4½d., and is now being held for 22s. 6d. to 23s.; Caraway seed, Dutch. 122s. 6d., Morocco 84s.; CORIANDER SEED, Sound 47s. 6d., Wormy 35s.; CUMIN SEFD, Malta 115s., Morocco 115s.; DILL SEED, 21s. 6d.; FENNEL SEED, Indian, 43s. to 45s.; FENUGREEK SEED, Morocco 25s., Indian 24s, 6d.; Hemp SEED, Manchurian, 25s. to 45s.; FENUGREEK SEED, Morocco 25s., Indian 24s, 6d.; Hemp SEED, Manchurian, 25s. 6d. LINSEED, Morocco, 25s. 6d.; MUSTARD SEED, English, 35s. per cwt.

SENEGA is quite firm at 3s. 2d. per lb. on the spot, and several weak holders have been eliminated.

Shellac is quiet but steady, with usual standard TN orange quality closing at 305s. per cwt. on the spot; good to fine second orange is 330s. to 380s., AC cakey 290s., and GAL 270s. Futures are slightly cheaper, with sales of March delivery being 290s., and May 292s. 6d. to 290s. per cwt.

STARCH PRODUCTS.—Dutch farina is quiet at 21s. per cwt. on the spot, and at 20s. per cwt. f.o.b. for prompt shipment. American maize starch powder is dearer at 18s. per cwt. on the spot, and dextrin is 27s. per cwt. for superior Dutch and 26s. for No. 2 on the spot. Best rice starch crystals offer at 40s. for English and 33s. 6d. per cwt. for Continental on the spot.

TAMARINDS.—Calcutta for January-March shipment are

offered at 20s. 9d. per cwt. c.i.f. London.

Taraxacum.—The "New York Drug and Chemical Markets" (December 26) reports that "English houses are offering inferior goods as a substitute, and some of the drug has been rejected by the Department of Agriculture owing to the large percentage of dirt contained therein." In London, supplies of both English and foreign appear to be depleted.

Essential Oils

EXCEPT for an active demand for Japanese mint oil, which is dearer, business generally is quiet. Cochin lemongrass has also improved slightly. The c.i.f. quotations for cassia oil have suddenly advanced again. On the spot there is no general market price. West Indian lime and Spanish spike oils are improving. Citronella oils are easier in absence of demand, and clove oil is a shade cheaper.

ANISE (STAR).—" Red Ship" is quiet at 1s. 9d. per ib. The price quoted to arrive is nominal at 1s. 8d. c.i.f.

BERGAMOT is dearer to arrive, the prices quoted ranging from 13s. 3d. to 13s. 6d. per lb. on the spot for 37 to 39 l.a. The c.i.f. prices range from 13s. 3d. to 14s., according to brand.

Bois de Rose (Femelle) on the spot is scarce and firm

at from 13s. 6d. to 14s. per lb.

CAJUPUT has been selling in some directions and prices are steady at from 3s. 3d. to 3s. 6d. per lb. as to sellers.

CAMPHOR is very slow at from 70s. to 72s. 6d. per

cwt, for white essential in drums.

CITRONELLA.—Ceylon is quiet and on the easy side at 3s. 11½d. per lb. for spot; the price quoted to arrive is 3s. 8d. c.i.f., which is unchanged. Java on the spot is 4s. 6d. per lb.; January-March sellers quote 4s. 4½d.

c.i.f., and April-June 4s. $3\frac{1}{2}$ d. c.i.f.

Latest advices from Java state that towards the end of November prices declined, and at Batavia spot oil changed hands at fl. 5.05 and fl. 5.15, the demand being good, whereas I tile business is being done in futures, January-June

deliveries being quoted fl. 4.60-4.65; however, it is noticeable that quotations vary in the different centres, Samarang reporting that offers of fl. 5 for January-March deliveries failed to find response among the sellers.

Cassia.—After declining to about 5s. per lb. for 80 to 85 c.a., the c.i.f. price to arrive is dearer, and bids of 5s. 3d. have been refused, with 5s. 7d. now quoted. Higher figures are asked, however, in some directions. Spot varies considerably. One holder will sell at 8s. 6d., but 9s. and 9s. 6d. are still current.

CLOVE is a shade cheaper at 9s. 3d. per lb. on the spot. EUCALYPTUS is barely steady at from 2s, 4½d. (for 70 to 75) to 2s, 6½d. (higher percentages) per lb. In some

directions discoloured oil is obtainable at less.

Geranium.—Small spot sales of Bourbon are reported at 34s. to 36s per lb. and sellers. The c.i.f. price is Parcels afloat, near at hand, are offered at 32s. cheaper. Parcels afloat, near at hand, are offered at 02s. to 33s. Algerian has been in fair demand, holders quoting

to 35s. Algerian has been in fair demand, holders quoting 31s. to 32s. per lb., Lemon.—There is a wider range of c.i.f. prices, which are rather dearer at from 2s. 8d. to 3s. per lb., as to brand. On the spot, from 2s. 10d. to 2s. 11d. is quoted. Lemongrass.—Cochin has improved in value with January March sales at 2½d. per 0z. c.i.f. to arrive and college. The come directions prove is asked. The market

sellers. In some directions more is asked. The market closes quiet. On the spot there are sellers at 2½d.

LIME.—There has been a good demand on American account for West Indian hand-pressed, with sales reported up to 6s. per lb. A small quantity of distilled may be obtained at 4s. 1d. on the spot, but probably much more would be wanted for a line. Sales have been made at 4s. c.i.f. to arrive, and in some directions further lots are offered at the price. But in view of a short crop, due to blight, doubt is expressed as to how supplies can be Higher prices, especially for distilled, are obtained. predicted.

MINT.—Japanese dementholised shows a considerable advance owing to a good demand principally on German account. Early in the week there were sellers at 12s. 6d., but by Wednesday the spot market had advanced to 15s. To arrive, a large business has been done comprising chiefly January-March shipment at from 10s. 9d. to

11s. 6d. c.i.f.

Orange.—Sicilian sweet is dearer to arrive, the c.i.f. price being 11s. 3d. per lb. On the spot there are sellers at from 11s. to 11s. 6d. For West Indian sweet the price is tending upwards at 9s. 6d., but in some directions. tions 9s. is quoted for good quality oil on the spot; 8s. for bitter.

PEPPERMINT.—American natural tin oil is firm on the spot at 15s. 6d. per lb. A fair business has been passing as slightly below this figure. Some importers are quoting

over 16s.

Petitgrain.-Paraguayan is steady at 8s. 6d. per lb. The official figures relating to the export of petitgrain oil from Paraguay are as follows: 1920, 73.6 metric tons; 1921, 57 m. tons; 1922, 56 m. tons. In 1913, only 33 metric tons were exported.

SASSAFRAS .- Parcels of American natural oil are affoat, and will be offered within a week or two. Price will be

about 10s. per lb.

Spike.—Spanish continues in good demand and sales of good quality are reported at 3s. 9d. per lb. Holders are now quoting 4s.

Pharmaceutical Chemicals, etc.

LITTLE change of importance is to be recorded in this market. The general tone is well maintained and supplies of a number of products are limited on spot. The posi-tion of imports from Germany is as last reported, with the importer paying the German Reparation levy of 26 per cent. Continental prices coming to hand are all on the high side. Salicylates are easier in sympathy with phenol.

ACETANILIDE remains in short supply on spot in consequence of the Board of Trade's refusal to grant licences to import any quantity. There is still plenty of genuine inquiry, and any supplies command 3s. to 3s. 6d.

per lb. AMIDOPYRIN seldom meets with any good inquiry; dealers' price is steady at 14s. to 14s. 6d. per lb. for

Ammonium Benzoate is offered by dealers from spot

stocks at the lower price of 3s. 9d. per lb.

ASPIRIN continues to find good business, with dealers receiving plenty of attention when offering round about 3s. 7d. to 3s. 9d. per lb.

BARBITONE is steady on a dull market; dealers' price is

close up to 17s. to 19s. per lb., according to quantity. BENZALDEHYDE (.03) is steady at 3s. 5d. to 3s. 6d. per 1b. for stocks in dealers' hands; a little activity is shown.

BENZOIC ACID, B.P.—Dealers have large orders on hand, but cannot fulfil them, as the Board of Trade persist in their unfortunate attitude of refusing to grant licences to allow import. The price is in consequence kept at the high levels of 4s. to 4s. 3d. per lb.

BROMIDES.—The healthy tone of the spot position is fully maintained and business continues quite good. Ammonium, about 9d. per lb.; potassium, crystals and granular, about 8d. per lb.; sodium, crystals and granular, about 83d. to 9d. per lb., all B.P. Spot stocks are not very plentiful now.

CALCIUM LACTATE has cheapened, having fallen back to

its former rate of 2s. per lb.

CHLORAL HYDRATE in dealers' hands is meeting with a little business, their price for duty paid crystals being

from 4s. to 4s. 2d. per lb.

CITRIC ACID, B.P., remains dull and weak, with spot stocks ample and little or no demand. Dealers quote at

about 1s. 42d. per lb., less 5 per cent.
CREOSOTE, B.P., is steady on a dull market as quoted by dealers at 2s. 6d. per lb.
CREOSOTE CARBONATE remains idle and seems of no

interest; quoted at about 6s. 6d. per lb.

GUAIACOL CARBONATE continues in very short supply on spot and with Continental offerings dear. Inquiry has been slow of late; quoted from 13s. to 13s. 6d. per lb.

HEXAMINE is slightly easier, with dealers quoting foreign

makes at 4s. per lb.

HYDROQUINONE is perhaps a shade easier, and there are plenty of spot offers for quantities at 3s, 9d. to 4s. per lb.; slightly more is asked for small lots.

METHYL SALICYLATE is easier at 2s. 11d. per lb. in car-

boys, in sympathy with other salicylates.

METHYL SULPHONAL is rather easier and dealers are now in a position to offer quantities at a shade about 20s. per lb.

PARAFORMALDEHYDE is steady with the market quiet. Dealers quote 3s. 6d. to 3s. 9d. per lb., according to

PARALDEHYDE holds at last week's better rates of 1s, 7d, to 1s, 7½d, per lb., with a little business coming dealers' way.

PHENACETIN is firmly held at 7s. 3d. to 7s. 6d. per lb. on the spot, and some dealers are now quoting 7s. 9d. to for small lots.

PHENAZONE is not to be had on spot below 8s. 6d. per lb., and some holders are not selling under 8s. 9d. per lb. PHENOLPHTHALEIN remains scarce on spot, with any

available worth about 8s. to 8s. 6d. per lb.
POTASSIUM PERMANGANATE —Dealers' price price is up to about 94d. to 92d. per lb., but this does not appear to be attractive to buyers. English makers quote B.P. crystals at 9d. per lb.

POTASSIUM SULPHOGUAIACOLATE seems of no interest;

dealers are offering at about 7s. per lb.

RESORGIN from reliable spot sources is still quoted from 6s. to 6s. 3d, per lb. It is doubtful if these prices have been obtained for actual business.

SALICYLIC ACID is slightly easier in sympathy with phenol: offered at about 2s. 6d. to 2s. 7d. for B.P.

Technical is about 1s. 6d.

Salol is firm with dealers' prices showing nothing under 4s. to 4s. 3d. per lb.

Sodium benzoate.—Larger supplies are now available: 3s. 6d. to 3s. 9d. per lb. is quoted:

SODIUM DIETHYLBARBITURATE is offered by dealers at

20s. per lb., but no business is recorded.

SODIUM SALICYLATE remains very firm. Supplies are by no means large, and there is still plenty of inquiry. Continental offerings are limited and dear. Crystals, B.P., 3s.; powder, 2s. 11d. to 3s. per lb

SILVER NITRATE.—The price of crystals on January 9 was based on a metal price of 33 ½ d. per oz. as follows:—
In quantities of 25 oz., 2s. 1½ d. per oz.; 50 oz.,
2s. 1½ d.; 100 oz., 2s. 0½ d.; 250 oz., 2s. 0½ d.; 500 oz.,
1s. 11½ d.

STRYCHNINE.—Makers' current prices crystals B.P., 3s. 3d. per oz.; powder, 3s. 2½d.; bisulphate, 2s. 6d.; hydrobromide, 3s. 3d.; hydrochloride, 2s. 9d.; nitrate, 2s. 9d.; and sulphate, 2s. 7d. per oz.

SULPHONAL is nominal with the market idle since the holidays. Quoted rates seem to vary and reach as high as 19s. 6d. per lb.

TARTARIC ACID.—B.P. crystals are still weak, but there

is more inquiry for forward delivery at 1s. 12d. per lb., less 5 per cent.

TERPIN HYDRATE keeps steady at the old rate of 1s. 9d. per lb., with occasional business.

per lb., with occasional business.

The following average prices are quoted by British makers: Cambnoric acid, 20s. to 18s. per lb. Bismuth salts: Carbonate, 14s. 9d. to 12s. 9d.; subnitrate, 12s. 9d. to 10s. 9d.; citrate, 13s. 4d. to 11s. 4d.; salicylate, 12s. 2d. to 10s. 2d.; cadmium sulphate, 4s. 6d. to 4s. 3d.; ether, 0.720, 1s. 6½d. to 1s. 2½d.; purif, ex S.V.M., 2s. 2d. to 1s. 10d. per lb.; iron ammon. cit., B.P., 2s. 3d. to 1s. 11d.; iron ammon. cit., U.S.P., 2s. to 1s. 8d.; iron ammon, cit., green, 3s. to 2s. 6d. per lb. Mercurials: Red oxide, 5s. 1d. to 4s. 11d. per lb.; corrosive sublimate, 3s. 10d. to 3s. 8d.; white precipitate, 4s. 8d. to 4s. 6d.; calomel, 4s. 3d. to 4s. 1d.; phosphoric acid, s.g. 1.750, 1s. to 11d. per lb.; potass. acetate, 1s. 3d. to 1s. per lb. Potash citrate, 2s. to 1s. 8d.; soda citate, B.P.C., 1s. 9d. to 1s. 5d.; soda citrate, U.S.P., 2s. to 1s. 8d.; soda nitroprusside, 16s. per lb.; soda sulphide, pure recryst., 1s. 2d. to 10d.; terebene, 2s. 8d. to 2s. 6d. pa. 1b. pe: lb.

The following are among the arrivals of chemicals which Acetanlide crystals, £308; butyl alcohol, £1,136; cellulose acetate, £606; hexamine, £142; lactic acid, £239; oxalic acid, £258; quinine ethyl carb., £249; sodium benzoate, £1,140; sodium phosphate, £1,142; unenumerated chemicals, £5,228 £ ,228.

Industrial Chemicals, etc.

THE spot market has not yet fully recovered from the holiday first has been celebrated, matters have been almost at a standstill. A revival is expected very shortly and the outlook is considered promising.

ACETIC ACID is now very steady after the slight reductions recorded last week. Dealers are doing a limited business, 80 per cent. technical, £45; 80 per cent. pure, about £50; 93 per cent. glacial, £73 per ton, in glass demijohns, ex wharf, London.

AMMONIA ALKALI (soda ash, 58 per cent. light) is quoted by British makers for the New Year to home consumers at the lower price of £6 15s. per ton, in bags, carriage paid in Great Britain.

Arsenic.—There is little alteration in current quotations for Cornish, which are nominal at about £66 per ton f.o.r. at the mines, while terms delivered at this end stand at fully £68. The future course of the market would seem to depend largely on possibilities as to further American buying, although it is stated that South Africa is still inquiring. Supplies in the meantime are very restricted, while inquiry

for home account is good.

BARIUM CHLORIDE is offered on spot by dealers at £14 10s. to £15 per ton for 98 to 100 per cent., but there is little

business about.

BLEACHING POWDER meets with a very slow demand from

dealers, who offer Continental at about £10 to £10 10s, per ton for 35 to 37 per cent. chlorine.

EPSOM SALT and GLAUBER SALT of commercial quality are rather steadier and have been in some demand. Dealers quote at about £4 15s. and £3 12s. 6d. per ton, in bags, respectively.

respectively.

Copper SULPHATE.—The recent steadier feeling has been retained, comparatively high terms being quoted in some quarters for far lorward contracts up to £26 10s., although business for near shipment for export can be arranged at between £25 10s. to £26 per ton f.o.b. for casks, less 5 per cent. Dealers quote £25 to £25 5s.

CREAM OF TARTAR has found a limited sale, with dealers steady at about 85s. per cwt., less 2½ per cent. for B.P.

FORMALDEHYDE is in plentiful supply, but in no great demand. Spot offers from dealers in the region of £63 per ton for 40 per cent. volume.

Lead acetate shows a further slight advance in spot values, with dealers offering little lots at: brown, £44 10s.; white, £45 10s. per tou.

LIME ACETATE is steady, with 80 per cent, grey at £22 per

LITHOPONE continues to find business, and the tone of the market is firm, with dealers offering spot 30 per cent. Continental red scal at £23 to £23 10s. per ton.

POTASH CAUSTIC has weakened a little on spot, but this may be only a temporary move. Some few weak holders of small spot lots are asking down to £32 per ton for 88 to 92 per cent, solid, in drums. Prices may recover when these parcels have been cleared.

POTASSIUM CARBONATE is not meeting with much demand at the moment. Spot stocks seem rather on the big side and prices are round about £25 for 90 to 92 per cent. and £26 10s. for 95 to 93 per cent.

POTASSIUM CHLORIDE remains dull, with little interest shown in dealers' offers at 23d, to 3d, per lb, for quantities.

POTASSIUM PERMANGANATE of commercial quality is quoted by British makers at 81d. per lb. Dealers are unable to meet this figure.

POTASSIUM PRUSSIATE is now steady, although still very quiet in demand. Dealers offer British at about 10d. per

SODIUM ACETATE is inquired for now and again, with holders asking about £23 10s, per ton for early delivery.

SODIUM BICARBONATE of British make for home trade only

is quoted at £10 10s, per ton, in bags free, carriage paid in Great Britain

SODIUM BICHROMATE for home trade only from British makers is unchanged at 4½d, per lb., delivered.

SODIUM HYPOSULPHITE keeps steady, with the spot position supported by Continental offerings. Pea crystals, in 1-cwt. kcgs, £16 per ton; commercial quality, £10 to £10 10s. per in casks.

SODIUM PRUSSIATE remains slack, with plenty of offers of

British make at about 5d. per lb.

SODIUM SULPHIDE is rather dearer on account of firmer cenditions on the Continent. There is, however, very little inquiry in dealers' hands, 60 to 62 per cent., solid, £15; ditto, broken, £15 10s. to £16 per ton, in drums.

ditto, broken. £15 10s. to £16 per ton, in drums.

COAL-TAR PRODUCTS. ETC.—Pitch remains dull and weak.
Carbolic acid crystals continue to fall in value. Other items are about level on the week, with the market quiet throughout. Aniline oil remains dull and unsteady as quoted by British makers, at about 9d. to 9½d. per lb., naked, ex works.
Aniline salt is unchanged and the market is weak; 9½d. to 9½d. per lb., naked, ex works, Betanaphthol is scidom inquired for; quoted at 1s. 1d, to 1s. 2d. per lb. Benzol: British makers continue to quote at level rates; demand quiet. Crude 65's. 8d. to 10d.; standard motor, 1s. 1d. to 1s. 3d.; pure, 1s. 6½d. to 1s. 8d. per gallon, ex works, in tank wagons. Toluol is steady after last week's decline, but is still in very little request; quoted at 1s. 8d. per gallon, f.o.r. makers' works, in buyers' packages. Xylol, pure 2s. 3d., commercial 1s, 6d, per gallon; market idle. Creosote oil is rather firmer and most quotations are moving up to 9½d, per gallon, f.o.b. A good inquiry is on idle. CREOSOTE OIL is rather firmer and most quotations are moving up to 9½d, per gallon, f.o.b. A good inquiry is on the market. CARBOLIC ACID crystals have fallen again and are now offering on a dull market down to 9d, per lb, in large bulk packing. Crude 60's is 2s, 8d, to 2s, 10d, per gallon and weaker. CRESYLIC ACID is a firm market at 1s, 11d, to 2s, 1d, per gallon for 97 to 99 per cent. Pale 25 per cent, is 1s, 10d, to 2s,, and dark 1s, 6d, to 1s, 10d, per gallon. Naphthalene is steady after last week's cut in dealers' price; offered at about £18 per ton. PyriDin is a good market as quoted by spot holders at 18s, per gallon, with supplies limited on spot. Pure METHYL ALCOHOL is not likely to fall below the present figure quoted by importers at £30 per ton, in drums, ex wharf, London. PITCH shows no sign of rein drums, ex wharf, London. PITCH shows no sign of revival so far and the market is admittedly weak. The quotations are in most instances maintained close up to 92s. 6d. per ton, f.o.b. East Coast, but any business would probably be at easier rates. WOOD TAR is steady on a quiet market at £4 15s. to £6 per ton, according to quality.

Fixed Oils, etc.

SINCE the re-opening of the markets after the holi-days and the New Year, business has been patchy, Some products have been fairly active, while others have been almost idle. Castor, palm and cotton oils are bright feetines. ACID OILS.—Somewhat lower prices obtain, and owing to lack of business, prices are nominal. Coconut and palm kernel. 41s.; groundnut, 37s. 6d.; soya, 38s. 6d., all spot. Castor holds very firm at level rates, ex mills, Hull. Pharmaceutical, 65s.; first pressings, 60s.; second pressings, 59s., spot to March, in barrels in not less than one-ton lots.

Coconut.-Prices are unchanged, but nominal, on account of practically no business. Deodorised, 52s., spot; Ceylon, 47s. c.i.f.; Cochin, 59s. 6d. c.i.f. Corron.—All grades are dearer after a week of satisfactory business, with the market or practically no business. Deconorised, 52s., spot; Ceylon, 47s. c.i.f.; Cochin, 59s. 6d. c.i.f. Cotton.—All grades are dearer after a week of satisfactory business, with the market closing firm; deodorised, 52s.; common edible, 50s.; soapmaking, 48s.; crude, 44s. 6d., all spot. Groundbut is quite steady, with values about level on the week; deodorised, spot, 61s.; crudc Oriental, 55s. c.i.f. Linseed (raw, naked). —A fair business was done in the early part of the week, with prices for all positions moving up. Towards the close matters have been quieter and values are returned at slightly easier rates, which show but little change on the week. On spot, 42s. 9d.; January, 40s. 10½d.; January-April, 36s. 9d.; May-August, 36s.; Hull, on spot, 43s. 3d.; January, 41s.; January-April, 38s. 6d.; May-August, 35s. 6d. Palm Kernel.—Last week's higher rates are maintained on a steady but quiet market; deodorised, 50s.; crude, 44s. 6d., all spot. Palm.—Early in the week some grades went to still higher rates, but have since receded to their former levels. The market, which has not been quite so active, closes steady with little change on the week. Lagos, 39s. 9d.; softs, 39s. 3d.; mediums, 39s.; hards, 28s. 9d.; bleached, 42s. 3d., all spot. Rape.—A firm tone continues here, with high rates prevailing. Refined, 49s.; crude, 46s. 6d., all spot. Soya.—A renewal of activity is recorded, with a further advance in quoted prices, market closing firm; deodorised, 49s.; crude, 45s. Turpentie.—The rather sharp spurt experienced in prices chiefly due to the substantial upward reaction in the American markets from the recent lowest, with Savannah advancing to about 94c., led to more interest, especially at the reduced rate of exchange, and the tone is firm, market on Wednesday closing 3s. dearer at 75s. The stocks of American spirit were returned at about 29,900 barrels, besides some 900 barrels of French spirit. On spot, 75s.; February-April, 75s, 9d, per cwt. Wood.—Hankow in barrels is firm at 94s. 6d., showing a slight advance on

Imports from Germany

It will be remembered that on November 15 last the German It will be remembered that on November 15 last the German Government issued an Ordinance, notifying suspension of payment to their nationals of the 26 per cent. levy made on imports of German goods into this country, under the German (Reparation Recovery) Act, 1920. In the past, Customs have collected this levy from British importers of German goods who passed Customs receipt on to the German exporter as part payment, paying 74 per cent, only in actual cash. The German exporter in turn passed the receipt on to his Government, who redeemed it by a eash payment. Thus the German exporter obtained cash in full and the German Government actually paid the leavent payment. Thus the German exporter obtained cash in full and the German Government actually paid the levy. full and the German Government actually paid the levy. On account of the sudden suspension of redemption under their Government's Ordinance, the German exporter is now demanding from the British buyer payment in full for his goods. The British Government, however, continue to inflict the levy, and importers are having to pay 26 per cent, out of their own pockets. This was quite bad enough and had the immediate effect of stiffening the spot marked in chamicals but the authorities of howest them informed. in chemicals, but the authorities at home then informed m chemicals, but the authorhes at home then informed importers that, as German exporters were only entitled to 74 per cent. cash payment for their goods, if they were paid in full, Customs would only consider it as 74 per cent. of the value of the goods. This in effect made the duty on £100 worth of goods £35 2s. 8d., instead of £26, which amount is paid by the British importer, and then is credited to the German Government as payment under Repearations. The leavy imposed for the purpose of abstract credited to the German Government as payment under Reparations. The levy imposed for the purpose of abstracting reparations from Germany has thus been turned into a protective tariff. Strong representations have been made to the Treasury, and the officials of that department have acknowledged the unfortunate position in which British importers are placed; but they can give no satisfactory reply to the importers' demand that either the levy shall be averaged. reply to the importers' demand that either the levy shall be suspended, or, if continued, a guarantee should be given to British importers that they will be able to recover the money from Germany. The wording of the Act clearly specifies that the duty is payable by Germany, and there is no single word to suggest that in the event of Germany's default, the levy should be abstracted from British importers. The attitude of the Government in standing on their dispite and inflicting injury on British traders while their dignity and inflicting injury on British traders, w their dignity and inflicting injury on British traders, wille they, on their own admission, are quite unable to make Germany conform to the Act by paying the levy, is the most striking instance of departmental arrogance and lack of thought for the welfare of the commerce of this country that has been experienced for a long time. In a spirit of abject apology the Government officials say as their last word: "The Government is bringing strong pressure to bear on Germany to recommence payment of the levy." That is, however, poor satisfaction to firms in this country.



Letters for this section should be written on one side of the paper only. Correspondents may adopt an assumed name for purposes of publication, but must in all cases furnish their real name and address to the Editer.

First-aid Problems

SIR,—I am rather surprised at the word of "caution" given by "Xrayser II" in your issue of January 5. I doubt if any medical man, nowadays, would endeavour to move "heaven and earth" in order to get a chemist prosecuted. Instead, to-day doctors I am associated with realise the value of first-aid. In another part of the C. & D. last week (page 27) there is mention of first-aid in factories. In those places we have illustrations of trained ambulance men, but without any pharmacy qualifications, rendering first-aid efficiently and well, and also being complimented by medical men for their smartness. Then why should chemists hesitate, or be afraid? Surely, with their professional abilities, they should be capable of doing the right thing, referring to medical men for further advice—and, with tact, ensure that their instructions are carried out. The financial side need not worry them, because a satisfied patient, as a rule, pays all right, and is also the best advertisement. We sell first-aid appliances, so we ought to know first-aid principles. But do we? I wonder!

Yours faithfully,

GLEDWARD (8/1).

SIR,—In your issue of January 5, under "Observations and Reflections," "Xrayser II" cautions chemists against incurring blame for rendering first-aid. In this matter, with all due respect, I think "Xrayser's" fears are unfounded. I am credibly informed that legal action has never yet been taken against a person possessing a recognised certificate for rendering first-aid according to the instructions given in the first-aid manual. If my information is correct, is not this one of the finest reasons why the pharmacist keeping open shop should obtain the certificate and, when called upon, practise first-aid according to instructions? I can speak with a certain amount of authority, for of the sixty pharmacists who obtained the first-aid certificates (some the label and some the medal) and were members of the Pharmacists' Division of the Liverpool Corps of the St. John's Ambulane Brigade (of which I was superintendent), I do not think there is one who has not found the experience and knowledge gained useful on some occasion.

Yours faithfully,
J. L. Hirst.

SIR,—The question of whether a chemist should render first-aid is a difficult one, as out of common humanity one does not feel disposed to refuse assistance to anyone who has had an accident. On the other hand, one can make no charge for service, so the work is purely gratuitous, and, in fact, often interferes with other business, and there is always the risk of a person, as instanced by "Xrayser II," being careless afterwards, with serious results, when he might try to claim damages from the chemist. It is therefore, I think, wisest to supply the lint and bandages first, and if any dressing is undertaken it should be done afterwards, as a favour, and on the strict understanding that no liability is taken or incurred. And the customer should always be advised to see a doctor as soon as possible.—Truly yours,

Insulin

SIR,—In your issue of November 24 last you were good erough to publish a letter from us warning your readers against a too ready acceptance of the somewhat sensational reports that had gained publicity as to the instability of Insulin in the tropics and the inactivity of British Insulin on arrival in India. In that letter we predicted that these reports might require serious revision, stating our reasons for this view and giving the results of actual experiments

which proved that such reports should be accepted—at all events as regards "A.B." Insulin—with considerable reservation. We now ask your assistance in making public the following further facts:—

We have had returned to us from India two bottles of our Insulin "A.B." brand. This Insulin was part of a batch which had been reported as having lost activity in India. We have had the contents of one of the bottles re-tested here, utilising for this purpose a bottle which arrived back in a half-empty condition, as we considered that this would be the most stringent test. The figures obtained showed with remarkable agreement that the activity was exactly the same as when the batch was first issued, two and a half months previously, in spite of the fact that this Insulin was sent out without any precautions as to cold storage during its journey to and from India, nor, so far as we are aware, was it kept in cold storage while in India. An interesting fact which may throw some light upon the reports of loss of activity in India is that the contents of the same bottle when tested in India did not reduce the blood sugar of the rabbits to anything like the same extent as we found it to do here before and after going to India. Four times the amount which reduced the blood sugar to the limit (i.e., 0.042 per cent.) in England only reduced the blood sugar to 0.062 per cent. in India. None of the rabbits in India went into convulsions, while on one-half the dose our rabbits went into very severe convulsions—one of them indeed being so severely convulsed that the life of the rabbit was with difficulty saved. These results suggest the possibility that rabbits in India on not give the identical quantitative reaction observed in temperate climates owing to climatic conditions, the nature of the food administered, or some such variant. These striking and apparently conclusive tests afford a gratifying vindication of our previously expressed view as to the stability of "A.B." Insulin.— Yours faithfully, The British Drug Houses, Ltd. Allen & Hanburys, Ltd.

"Roving the World"

SIR,—As stated in the foreword of my booklet, "Roving the World," it was really written with the view of distributing to the many personal friends I have at home and abroad; but following the notice of the book in your columns (and it is wonderful what a far-reaching effect such a notice in your paper had), so many requests for copies have reached me that the issue has been exhausted. One result of the publication of the work has been to reveal to me how many friends I have scattered up and down the kingdom, owing, I suppose, to the fact that during my twenty-five years on the road I covered nearly every part of the three kingdoms, and consequently enjoyed a very large amount of acquaintanceship, or I would rather say friendship, with members of the craft. As I am unwilling to disappoint any of my friends, I have arranged for a further issue, which will be ready about the end of February, and will then be glad to send a copy to any who may like one. I should like to take this opportunity of sincerely thanking my friends for the flattering and kind remarks made concerning the book, which I much appreciate.—Yours, etc.,

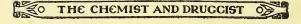
34 Hanover Street, Liverpool. W. H. Saunders.

34 Hanover Street, Liverpool. W. H. SAUNDERS. Toxic Effects of Sulphur?

SIR,—The recent enlightening discussion in the C. & D. on poisonous doses of the cyanogens and their antidotes induces me to refer to a case I had here recently of poisonous symptoms after taking sulphur. As scabies has been very prevalent in parts of Ireland for some time past, I usually advise the use of the surface contents of a shilling covered with sulphur as well as external treatment. In the case I refer to (in an adult) there were very alarming symptoms of poisoning—severe abdominal pains, violent headaches, a tendency to paralysis of the motor functions, and profound depression lasting for four hours. Would it be possible contamination with excessive arsenic? I have looked up "Murrell," which every chemist should have, but do not find sulphur included in his toxicological list.

WM. DUNPHY, PH.C.

Bantry, co. Cork.



Legal Queries

- $C.\ E.\ F.\ (5/1)$.—The section of the Workmen's Compensation Act, 1923, which came into force on January 1, dealing with first-aid cabinets in factories, was printed in the $C.\ \&\ D.$, January 5, p. 27. Further particulars are given elsewhere in this issue.
- C. H. D. (2/1).—It is not necessary to obtain any signature, nor enter into any register sales of "dangerous" drugs, when they are outside the Dangerous Drugs Acts and Regulations. The articles must, however, be labelled "poison" in accordance with the Pharmacy Acts.
- S., Ltd. (4/1).—(1) "Movacoff" is not a trade-mark so far as we are aware. (2) The "known, admitted and approved" remedies would have to be re-registered if you altered the title in the way you suggest, as these preparations can only be sold under the title under which they are entered.
- H. N. (31/12).—If the chilblain paint consists only of colloidal iodine, as stated on the label, this would be a disclosure as required for "known, admitted and approved" remedies, and it will be saleable by chemists without payment of medicine-stamp duty. The two methods are to disclose the composition on the label or indicate the formula in a recognised work of reference.
- H. F. & Co. (7/1).—C. & D. Poisons Card No. 4.—The entries for ext. papav. liq., B.P.C. (0.08 per cent.), and syr. papav. (0.032 per cent.), are given as "approximate" because there is no standard for morphine in poppy capsules. If your wholesale house states that liq. papav. pro syrupo (1-7) does not contain more than 0.05 per cent. of morphine you should accept the statement.
- S. T. W. (5/1).—The label "Jones's Lung Tonic" would render the preparation to which it is attached liable to medicine-stamp duty, because of the proprietary claim in the use of your name in the possessive case. The article will also require labelling "poison," but the exact wording as to the proportion of poison cannot be stated until the Order in Council is published. This may be some time yet, owing to the political situation.
- A. P. (31/12).—The Poison Proportion Table which is given in the Diary will be required when drawing up labels for articles containing statutory poisons so soon as the Order in Council is issued under Section 4 (2) of the Dangerous Drugs and Poisons (Amendment) Act, 1923. The draft Order was published in the C. & D., but there is reason to believe that as a result of criticism the Order will be modified so as to conform with the requirements of the Act.
- Aloes (23/1) recently sold his business at a price of £1,100. All the negotiations were effected by his solicitor, who advertised the business, dealt with inquiries, prepared the contract and conditions of sale, and completed the transaction. The solicitor's charges amount to £33; is this justified under the Solicitors' Remuneration Act? [There is no scale fee for the services which the solicitor performed, so that "Aloes" can, if he likes, insist upon a detailed statement of account. In our view, however, the charges are not unreasonable.]
- J. E. G. (31/12).—A man has died intestate, leaving property valued at less than £100 and debts exceeding that amount. Can his wife and children take the property? If the principal creditors agree to accept a composition will this bind all the other creditors? What procedure should be adopted? [The family may take charge of the property in the meantime; but they will-ultimately have to account to the creditors for the whole of the estate. As the estate is insolvent it is not worth while for the family to take out administration. We suggest that the principal creditors should be called together and one of them invited to administer the estate. A composition is not binding upon a creditor who has not assented to it.]

- J. E. (28/7).—A registered medical man cannot act as a qualified assistant to a chemist and druggist, his rights under the Pharmacy Acts (see C. & D., January 5, p. 34) being to carry on his own business. Section 16 of the Pharmacy Act, 1868 (the "widows clause") and Section 3 (2) and 3 (4), which permit qualified persons to act in place of a qualified proprietor, give that power only to pharmaceutical chemists and chemists and druggists. There is no modified pharmaceutical examination for medical men.
- W. & P. (31/12).—(1) A preparation containing pulv. nucls vom. requires under the Pharmacy Acts to be labelled "poison." When the Order in Council is published under Section 4 (2) of the Dangerous Drugs and Poisons (Amendment) Act, 1923, the name and proportion of the poison will have to be stated on the label. (2) If you trade under any other name than one which includes the names of the partners you must register the name under the Registration of Business Names Act, the registry for which is at 3 Clement's Inn, London, W.C.
- R. A. C. (31/12).—"Digestive mixture" is not a dutiable title under the Medicine Stamp Acts, but "Rheumatism mixture" and "Neuralgia mixture" are dutiable titles. If, however, the disclosure of the composition given on the label is bona fide, the articles become "known, admitted and approved" remedies saleable by chemists without payment of medicine-stamp duty. Disclosure of the composition on the labels is the alternative method to giving on the label a reference to the formula in a recognised work of reference. Formulas for "known, admitted and approved" remedies can next be published in the C. & D. Diary, 1925.
- F. A. (55/32) owns a sectional wooden building which the Poor Law Guardians have assessed at £8. A brickbuilt shop of the same floor area not ten yards away is assessed at £3, and another building in the same road fifteen times as large at £20. "F. A." has appealed against this assessment without success. When the assessment committee heard the application the assistant overseer for "F. A.'s" parish was not present. Was his absence in order? What can "F. A." do? [We do not consider that "F. A." can claim a rehearing of his appeal because the assistant overseer was not present. He can, however, appeal against the assessment to Quarter Sessions and, if he decides to do so, he had better instruct a solicitor. As the amount involved is small, "F. A." should consider whether it is worth while to incur the expense of an appeal upon what is mainly a question of principle.]
- C. J. (2/1).—The protection of copyright and trademark are things totally distinct. Copyright, like a patent, relates to the substance of an article, but differs in that it has reference to a literary or artistic production instead of to a material production. A trade-mark does not protect the substance from being imitated, but it identifies an article and indicates the source to which that article is to be attributed. "Trade-mark" not being "copyright," it becomes incumbent upon the proprietor of a label to register it under the trade-mark laws. Even a periodical publication, like a daily newspaper, requires the title registered under the trade-mark laws if the proprietor desires to protect it against infringement. Until the Copyright (British Museum) Act, 1915, became law there appeared to be some sort of copyright protection of artistic labels between the dates of their production and their appropriation for the use for which they were obviously designed, but even that doubtful protection has been lessened by the Act named. The basic principle of this distinction is doubtless that whereas copyright is a protection for a limited period, trade-mark protection is unlimited in duration. The trade-mark laws recognise an inalienable right in perpetuity to anything protected under the trade-mark laws which fulfils the functions of a trade-mark by (inter alia) indicating the trade source of the goods, provided that such right is also maintained by "user."

Water

Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyse and report upon proprletary articles nor to publish supposed formulas for them.

E. G. E. (17/12).—WASHABLE DISTEMPER: Whiting China clay 20 lb. Glue Pine oil 3 gallons 12 gallons Poi'ed oll 3 gallons 1 lb. Cheap oak varnish ... • • • • Glycerin ••• ... 10 gallons

U.trama ine b'ue 5 oz.
There is a different recipe in "Pharmaceutical
Formulas," whilst yet another type consists of the use of Ultramarine blue ... pctassium bichromate as an ingredient along with glue. When exposed to light the bichromatised glue becomes insoluble.

...

...

R. D. (17/12). DRY SHAMPOO.—In the C. & D., April 28, 1923, p. 583, you will find a formula for dry shampoo and particulars of the method of obtaining permission to use in it industrial spirit.

(12/12).—CLEANSING GOATSKIN COAT.—We S. E. L.are not quite sure from your inquiry whether the goatskin coat has a cloth exterior. If not, the process of purifying it is comparatively easy with warm soap and vater, afterwards rinsed off with warm water. If there is a cloth lining or covering, there is a risk of shrinking the cloth by washing, and it is possible that the application of a solution of pine oil in spirit would have the effect of hiding the smell.

E. B. (13/12).—PREPARING PHOSPHORIC ACID.—To obtain phosphoric acid from superphosphate made from bone ash and sulphuric acid the fertiliser must be digested with water for two or three days. Then press in linen filters to separate the calcium sulphate and concentrate the filtrate to a syrup, add sulphuric acid to precipitate lime, filter, evaporate and heat to remove sulphuric acid. Another process is to add ammonium carbonate to the first acid solution, which precipitates the lime and leaves tri-ammonium phosphate in solution. The solution is then evaporated to dryness and ignited to expel the ammonia.

J. W. M. (13/12).—Black oils, to suit your label:—

IIOlive or rape oil ... 1 lb.
Oil of turpentine ... 2 oz.
Mix and add carefully
sulphuric acid 6 dr. Linseed oil 1 pint Oil of turpentine ... 12 oz. Sulphuric acid Crude oil of amber 2 oz.

Some black oils have the colour intensified by the addition of balsam of sulphur and Stockholm tar, an ounce of either or each to a pint being used.

M. & Co. (28/12).—BISMUTH AND MAGNESIA TABLETS.— The following is the formula for which you inquire :-

Bismuth · carbonate 8 oz. Magnesium carbonate (heavy)... 35 oz. Sodium bicarbonate 8 oz. *** ٠... Powdered gum acacia 10 oz. 80 oz. Sugar Oil of cinnamon ... Spirit of chloroform 120 gr. 2 dr.

F. E. C. (28/12).—Dobell's solution:—

Pulv. boracis Sodii bicarb. зij. Ac. carbol. ... gr. xxiv. Glycerin. 5ss. ad 5xvj. Aq.

Dissolve the salts in half the water and the acid in the glycerin, mix the solutions, make up to 16 oz. with water and filter.

O. P. (1/1).—CLEANING SCARLET COATS.—The following is from "Pharmaceutical Formulas":—

Stanni chloridi cryst. Acidi hydrochlorici Acidi tartarici ... ••• ••• Ξj. 38S. Aquæ ... 3xvj. Solve.

Apply to the stains with a sponge, and dry out of doors.

R. G. M. (23/12).—Turkey red oil is obtainable from wholesale druggists. It is a sulphonated castor oil, and is used in large quantities in the textile industry as a dressing. A method of making it was published in the C. & D. Diary, 1919, p. 91.

K. Y. N. (18/12).—MIST. BISMUTH. ET AMM. CIT. (Guy's Hospital) :-

Liq. bismuth. et amm. cit Spt. amm. arem. mxxx. Aq. chlorof. ... ad 3j ...

H. C. (24/12).—CLEANING WHITE MARBLE.—There are two methods of doing this-the one in which an alkali is used and the other with an acid. The former is mostly employed in the case of marble tombstones which have become weathered.

Dried sodium carbonate 2 oz. Powdered pumice ... 1 oz. Chalk 1 oz.

Mix and sift. Rub the powder made into a cream with water over the soiled parts and wash off with soap and water.

Cream of tartar Oxalic acid 1 oz. 1 oż. ... Kieselguhr

Mix into a paste with water and leave on tho stained part; then wash off with water.

E. D. O. (7/1).—LITTLE LIVER PILLS.—The following is the formula for which you inquire:—

Aloin. Jalapin, Res. podoph., Gingerin ...
Syr. glucosi ...
Dose: ½ to 2 grains. Gingerin aa31 q.s.

Alpha (31/12). - TREATMENT OF LEPROSY. - We have published at various times the steps which Sir Leonard Rogers took in arriving at his conclusions that the active principles of chaulmoogra oil are beneficial in leprosy. There was an article on the subject in the C. & D., I, 1921, p. 8. The treatment is being tried in this country, but we do not know what doctors are concerned with it. Burroughs Welcome & Co. supply the preparation under the name of Moogrol. There is a good account of the treatment in Martindale's "Extra Pharmacopæia" under the heading Ol. chaulmoogræ.

C. E. (31/12).—CRUDE RAPE OIL is brown in colour and is refined by means of sulphuric acid, when "refined rape oil" of a pale yellow is obtained. The terms colza and tape are now interchangeable, but formerly colza oil was the French or German product. Now that Indian rape is used in European oil mills colza oil denotes a refined rape oil. Colza oil, obtained by extraction with solvents, is of inferior quality but not objectionable as burning oils.

Lupulus (27/11).—PRICE OF PRESCRIPTION.—On the C. & D. pricing system the following is the charge for this:

6.0 3.5 Sulph. sublim. 3j. Conf. sennæ P. jalapæ ... Syr, papaveris q.s. ... 1.5 3.0 ... • • • 10.0 Container .. 9,0 Dispensing oncost 33.0d.

Charge 2s. 9d.

S. & H. (2/1).—Syrup. Hypophosph. co. B.P.C.—We have carefully looked into the problem of the syrup hypophos. co. you sent. We find the sample contains 0.08 excess of acid calculated as absolute hypophosphorous acid. The remedy for the lack of colour in the sample is to add sufficient liq. sodæ (5 per cent.) until normal is reached, when you will find the normal colour return.

A. E. D. (2/1).—Local anæsthetic solution.—The formula you send for the local anæsthetic is too dilute unless it is going to be used over a very large area. The strength of adrenalin generally required is 1 in 10,000, though some use only 1 in 100,000 when a very large area is being covered. Potass, iodid, is rather unusual in an anæsthetic. Also in the solution the carbolic acid is sufficient to prevent growth in this dilution. The gaultheria night effect this, and, if so, the carbolic is unnecessary. The proportion of cocaine also is somewhat small.

- C. C. B. & S. (Calcutta) (14/11).—(1) C. & D. RETAIL PRICE LIST.—The list is prepared on a costing system, one feature of which is that the rate of profit varies according to the turnover of the particular article. This was arrived at by a statistical study of the drug returns of many businesses. We do not issue a price list of proprietary medicines, this being unnecessary in this country, where many excellent lists are published by the wholesale dealers.
- (2) Insurance dispensing is explained in the article on National Health Insurance in the C. & D. Diary.
- (3) It would be difficult for us to arrive at a definite percentage of difference of cost of pharmaceutical preparations in London and in India. It is mainly the spirit duty that is the disturbing factor.
- K. Co. (22/11).—(1) VETERINARY EMBROCATION.—The following is from "Veterinary Counter Practice":—

Ol. terebinth. ... - ... 5xvj.
Camphoræ ... - ... 5j.
Saponis mollis ... - ... 3j.
Aq. destil. ... 31j. v

Aq. destil. 31]. vel. q.s. Mix the soap with the water; dissolve the camphor in the turpentine; mix the two and bring down to the desired consistency with water.

(2).—Embrocation.—The following is the "known, admitted and approved" formula for which you inquire:—

Camphoræ ... 3ij. Saponis mollis Ol. eucalypti Ol. rosmarini aaOl. terebinth. Ol. amygd. . 3xl. Liq. ammon. fort. ... žiij. Aq. dest. ЭхI. Misce.

- (3).—Tollet preparations are not subject to medicine stamp duty unless they are recommended for human ailments. Chapped hands are not classed as ailments.
- A. H. (20/11).—Spirit conversion.—This question was dealt with in an article by Mr. F. C. J. Bird (C. R. Harker, Stagg & Morgan, Ltd.) in the C. & D., December 27, 1919, in connection with the conversion of spirit of various strengths into proof spirit in connection with the rebate on medicinal spirits. The strengths of spirit there dealt with are those of the British Pharmacopæia; for other strengths it will be necessary to consult alcohol tables (a convenient book is Thorpe's "Alcoholometric Tables," Longmans, 4s.). You will find a convenient diagram dealing with over- and under-proof spirit in The Chemist & Druggist Diary, 1923, p. 235.
- W. H. (21/11).—HAIR TINTING PREPARATIONS which effect a gradual change in the colour of the hair are, so far as we have examined them, of the sulphur and lead type, formerly known as hair restorers. If there is reason to believe that a new variety of restorer has been evolved we shall be glad of particulars, with a view of investigating it. (2) SWEEPING POWDER.—See C. & D., April 14, 1923, p. 534.
- J. M. (Buenos Aires) (15/10).—Dental wax.—The sample you send is apparently a mixture of beeswax (7) and hard paraffin (1), the usual proportions being indicated by the figures in parentheses. The paraffin wax is added to overcome the sticky property of the beeswax.
- J. C. K. (South Africa (12/10).—(1) FLY DETERRENT.—
 The paragraph you refer to was to the effect that when
 the walls of a room were of a blue colour. flies were fewer
 in the room than if the walls were of any other colour.
 The colour may be that of either paint or distemper. (2)
 CHEMICAL DICTIONARY.—In addition to Kingzett's "Popular
 Chemical Dictionary," you would find Bloxam's "Chemistry" (Churchill, 36s.) useful. A more ambitious work is
 Thorpe's "Dictionary of Applied Chemistry" (Longmans,
 5 vols., £3 per vol.).
- C. H., Ltd. (6/11).—Floral cachous.—The modern variety consist of a lozenge base with which is incorporated the required colour and flavour. Violet cachous, for example, require the addition of orris oil or ionone; and are coloured violet. We have no working formula for this class of cachous.

- R. D. (29/10).—AGAR-AGAR.—Good summaries of the sources and uses of agar-agar are published in Squire's "Companion" and Martindale's "Extra Pharmacopœia." "World's Work" for November 1920 contained an account of the collection and treatment of agar-agar on the Pacific Coast of the United States, where it is a new industry. In addition to the use of agar-agar in medicine it is employed in bacteriology (for nutrient jellies) and largely in the textile industry.
- T. T. & Co. (7/11).—ETHYL-HYDROCUPREINE is looked upon as a dangerous drug owing to its specific action on the optic nerve. Blindness has been caused through the arministration of the drug.
- H. S. S. (29/10).—Moths in furniture.—There is no process for destroying moths in the upholstery of furniture that has not disadvantages attached to its use. Benzine is fatal to moths and their pupæ, but its inflammable nature is against its use in the house, particularly as considerable quantities are needed to saturate the infected material. It is better to have the article re-upholstered if its value warrants its preservation.

Lupulus (27/11).—BEER FININGS.—The finings used for clearing cloudy beer is made as follows:—

Cover 1 lb. of isinglass with cold water, then add 4 oz. of tartaric acid; cover and let stand for twenty-four hours, adding water if needed, and stirring until all the isinglass is dissolved; then pass through a sieve. For use 2 pints of the liquid is required for 30 gals. of beer.

- R. H. E. (4/12).—Preserving animal skins.—The process generally followed, which would be applicable to chinchilla skins, is to fasten the skins fur side downwards on a board. Scrape away all superfluous fat and daily for a week rub into the surface a mixture of alum and salt or wet with a saturated solution of these salts. Drying is effected by using bran, and sometimes arsenical soap is employed to aid in the preservation of the skin from attacks of insects.
- K. & S. (5/1).—Price of prescription.—The charge for the prescription you send is, on the C. & D. costing system, 3s. 2d.
- Sp. Gr. (7/1).—A method of obtaining a liquid of a particular sp. gr. from water and another liquid of known sp. gr. was given in the C. & D., June 16, 1923, p. 858. If this does not fill your requirements we shall be glad to supplement it.

Retrospect of Fifty Years Ago

Reprinted from
"The Chemist and Druggist," January 15, 1874.

Professor Bentley, F.L.S.

Professor Bentley, F.L.S.

I'The opening paragraphs of an illustrated biography.]

This excellent botanist and most popular lecturer was born at Hitchin. Herts, being connected on his father's side (William Bentley, solicitor) with Charles Lamb; and on his mother's side with the Society of Friends. He was first attracted to the study of science by reading works on chemistry and natural history to a friend who was blind. He was apprenticed to William Maddock, of Tunbridge Wells, one of John Bell's early apprentices. Mr. Maddock had been in practice as an apothecary at Deptford previous to the passing of the Apothecaries Act in 1815, a circumstance which influenced the present step, for it was the ultimate ambition of Mr. Bentley to enter the ranks of the medical profession. This very period of apprenticeship was the foundation of his whole after-life-our Professor is at this moment but continuing the occupations of his youth, and leading them to their legitimate results. He originally spent much time in the study of mathematics, and frequently sat up whole nights engaged in this favourite pursuit. Nature will never brook the violation of her laws, and then, as always, she asserted her just rights. It is scarcely necessary to add that Mr. Bentley's health was much injured, nor do we think that he has been ever entirely free from the consequences of this unwise application. Botany was then commenced in the hope that its study would effectually counteract too sedentary occupations, and that the "liberal air" and outdoor exercise would repair the mischief done.

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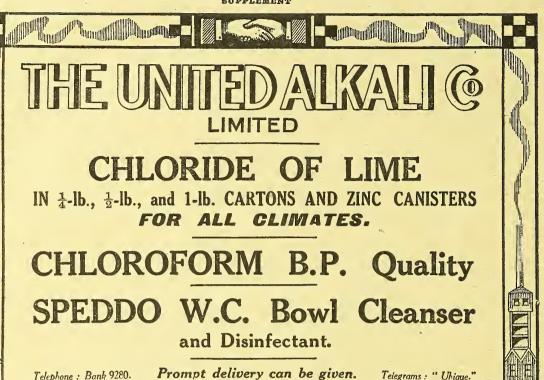
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Made from fully-matured bark to prevent griping.

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	Per	dozen bo	ttles,	
American Intend Ordeline	- ea	ch contai	ning P	er 1,000
Ammoniated Quinine,		50's		
drm. ½, S/C or C/C ~	4/~	6/-	10/-	5/6
Ammoniated Quinine,				
drm. I, S/C or C/C -	5/~	8/-	14/6	9/3
Anti-Influenza	4/9	7/3	12/6	7,6
Anti-Neuritis	4/6	7/9	13/6	7/6
Aspirin, grain 5	3/6	5/-	7/9	4/-
Backache & Kidney, C/C	4/3	6/-	10/-	5/-
Cascara, gr. 2, S/O -	3/-	4/6	7/-	3/6
Cold Cure, C/O	5/3	8/9	17,-	11/-
Formalin, Throat -		4/6	<u> </u>	3/3
Formamint, P. J. F.				
46 (20)	_	4/6	_	3/6
Neuralgia, S/C	4/9	7/6	13/6	9/-
Phosphated Quinine,	•	,		
S/C	3/6	5/3	9/-	4/6
Quinine & Cinnamon	4/3		11/3	
Quinine, Cinnamon &	2/0	0/0	10	-, -
	4/9	7/3	12/6	7/6
Eucalyptus, S/C Pink	4/7	1/3	12/0	210
Quinine Sulph. or Bi-	- 10		001	1210
sulph,gr.2,S/C or plain	6/3	11/-	20/-	13/9
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1 oz.	packets	 8/9	,,
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4 oz.	,,	 16/9	,,,
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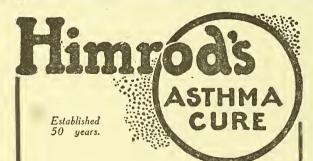
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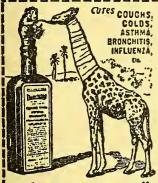
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	Contents of Case	Costs You	Yields You_	Total Profit	Profit % on Selling Price	Profit % on Buying Price	Profit per bottle
CASE "A"	1 Dozen 5/- Size	48/-	60/~	12/-	20%	25%	1/-
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CASE "E"	2 Dozen 3/- Size	57/-	72/-	15/-	20.83	26.31	7½d.
CASE "F"	6 Dozen 3/- Size Bonus, 6 at 3/-	171/-	234/-	63/-	26.92	36.84	9½d.
		CAS	ES OF M	IXED SIZ	ES.		
CASE "C"	Dozen 5/- Size Dozen 3/- Size	52/6	66/-	13/6	20.45	25.71	e ,
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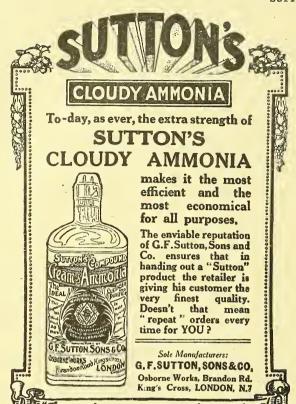
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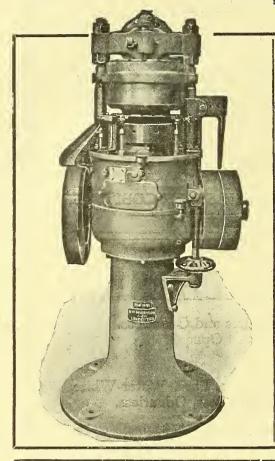
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Machine -

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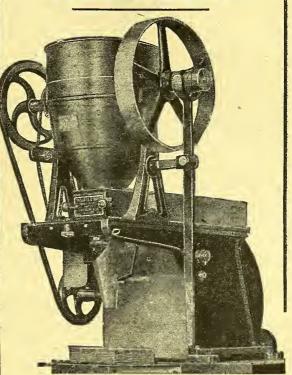
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For a small Central Window Display of not less than 14 days and an order for £5 worth of Phosferine we allow a bonus of 10/6; on a $£2\ 10\ 0$ order 5/3.

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EXAMPLE.

		CO	ST	SELLS FOR
$3\frac{1}{2}$ dozen 1/3 size at 12/- net		£2 2	2 0	£2 12 6
2 ,, 3/- ,, at 30/- ,,	•••	3	0 0	3 12 0
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Less 10/6 for Window Show		10	0 6	
	I. ~	£4 1	1 6	£6 4 6

Showing a Net Profit of £1 13 0 on an outlay of £4 11 Window Display Material Free and Carriage Paid.

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THE CHEM

42 CANNON ST. LONDON E.C.4

JANUARY 12, 1924

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The clerical work in connection with the posting of spare copies of the Coloured Supplement week by week has increased to such an extent that we have been compelled to reorganise our system of distribution. Our readers will please note, therefore, that, in future, instructions can be accepted for not more than six successive issues of the Supplement at a time, and that in every case

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6.—KENSINGTON—Very old-established Business: returns.

well-fitted, double-fronted shop, fully stocked; rent, £52 yearly; price £700.

6.—KENSINGTON.—Very old-established Business; returns, about £1,200 per annum, increasing; scope for further devolopment under qualified supervision; good profits; attractive, well-fitted shop, double-fronted; house sublet to show profit rental; further details on application.

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the hands of a principal.

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4.—GLAMORGANSHIRE.—Well-fitted Pharmacy, in busy centre, with scope for considerable increase; rent, 10s. per week; new lease to be arranged; returns average £20/25 per week. (97)

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Inveneral and assist Buyer; there is ample scope for Agricultural trade.

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JANUARY 12, 1924

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LONDON, S.E.—Qualified Manager, reliable, for middle-class suburban business, N.H.I., first week February. State age, experience, references, salary required (outdoors) to "E.," 37/188, Office of this Paper.

LONDON, S.W.—Manager required for business in workingclass neighbourhood; good opportunity for energetic man with initiative and "push"; highest references essential; salary, commission, with house. 70/292, Office of this Paper.

LONDON, W.-Manager; qualified; good Salesman and Window-dresser essential and Photography; capable of working up neglected business; age between 25 and 40 years. 37/190, Office of this Paper.

MIDLANDS.—Wanted, a really smart, energetic Assistant, with all-round experience, about 26, qualified or unqualified, to work with principal; splendid opportunity for the right man. Copy of recent photo, two testimonials, state salary required. 61/32, Office of this Paper.

MIDLANDS, near Birmingham.—Unqualified Assistant, single, required for working-class business; must be a competent Dispenser and a good Counterman. "Mid," 70/29, Office of this Paper

NEAR LONDON.—Assistant, about 35; tall; qualification immaterial; must be a good all-round man; smart, active and willing; experienced Salesman and competent knowledge of Kodak Photography essential. State age, height, if married, details of previous experience, salary required, and when disengaged. 74/6, Office of this Paper.

OUTH WALES.—Competent qualified or unqualified Assistant required; over 30; good Salesman and Window-dresser; sound knowledge of Photography essential; permanency. Apply, stating full particulars. Applications not answered within a week respectfully declined. 74/38, Office of this Paper.

OUTH WALES Colliery District.—Wanted, qualified lady or gentleman; must be well up in Panel Dispensing, also used to Counter work. Please state age, experience, references and salary required (outdoors); part-time not objected (send photo if possible). "Wales," 73/3, Office of this Paper.

CWANSEA.—Young lady Assistant required; must have had Dispensing and Counter experience and have some knowledge of Surgical work; permanent and progressive post. "S.," 70/291, Office of this Paper.

YORKSHIRE. — Smart, energetic, unqualified Assistant required for quick cash business in main thoroughtare; good Counterman and Dispenser. "Yorks," 70/290, Office of this Paper.

JANUARY 12. 1924

YORKSHIRE.—Energetic Junior Assistant (qualified or unqualified) wanted; must be smart, courteous, and obliging Salesman, accustomed to quick Counter trade; good Dispensing and Photographic experience also essential; permanency for good man. State age, height, experience, references, salary required. 74/21, Office of this Paper.

A SSISTANT, Junior, unqualified, wanted for West-End Pharmacy; good Window-dresser; part-time application entertained. Apply by letter, stating experience and salary required, to Mansell, 42 Shaftesbury Avenue, W.1.

A SSISTANT wanted for brisk middle-class trade, lady or gent., not over 30; must be a thorough good Counterhand. Apply Marshalls, Cash Chemists, 78 High Street, Kingsland, E.8.

ENERGETIC Assistant; unqualified; knowledge Photographic Dealing and Wireless; used to good-class business; no Dispensing; good references essential; outdoors; permanency suitable man. Apply, with particulars and photograph, Bathe, 24 Fleet Street, Torquay.

INERGETIC Assistant required, one capable of taking charge; good Salesman essential. Johnson, Chemist. Milford Haven.

GENUENE chance for qualified man with plenty of push, willing to take a small financial share in business situated in one of best sites in London; salary £5 per week and 10% share in net profits at end of year for every £100 (withdrawable) invested. Apply in first place to 32/130, Office of this Paper.

IMPROVER or Junior required with General and Photographic experience; must be good worker. Particulars and salary required (outdoors), Blades, Chemists, Leek.

JUNIOR, good Dispenser, neat methodical worker, accustomed to busy good-class Dispensing business; London, W.9. Write 74/4, Office of this Faper.

ADY Dispenser and Book-keeper required for country medical practice by February 5. State salary required to 64/7, Office of this Paper.

ADY Dispenser wanted; evenings 6.30 to 9.30. State age, experience, references and salary expected, 73/16, Office of this Paper.

MEDICAL Practitioner requires Dispenser (lady); live out; work light. Apply in first instance to Harold Mitchell & Co., Chemists, Forest Gate, E.7, stating age, salary required, and enclosing photo (to be returned).

PERMANENCY for a capable, unqualified Assistant; must be a good Dispenser, Salesman, and Window-dresser; also with knowledge of Photography. Interview_if possible. Patterson, Chemist, Claygate.

QUALIFIED Junior, young, for Counter and Dispensing. State salary required, experience, etc., in first letter. Applications not answered in three days please consider respectfully declined. A. S. Price & Co., Ltd., Blackheath, Birmingham.

QUALIFIED Assistant, smart appearance, good Dispenser, Counter Hand, and Window-dresser, for first-class Pharmacy in best district of Birmingham. Apply "Radix," c/o Southall Bros. & Barclay, Ltd., Birmingham.

QUALIFIED; energetic; 30-35 years; salary, commission on sales, bonus on profits; splendid opening for a live man. P.C.B. 32/13, Office of this Paper.

QUALIFIED Assistant, 32-35, accustomed to store trading and making own preparations. Full particulars and photo, Lankester & Crook, Ltd., Woolston, Southampton.

QUALIFIED man, 26 to 30 years of age, for quick middleand working-class Business; knowledge of Photographic and Agricultural trade. Full particulars, in first letter, T. P. Parker, 9 Bridge Street, York.

QUALIFIED Manager wanted for London district; must be well up in every branch of the business, and have unquestionable references; good prospects for the right man. Apply, 3, Ridgmount Street, Tottenham Court Road, W.C.1.

QUALIFIED Assistant, S.E. London; Retail, N.H.I., Photography. Apply, stating all particulars and salary required, to 72/38, Office of this Paper.

QUALIFIED Assistant required; Counter, Photographic and N.H.I. Please state experience and salary (outdoor) to "Statim," 73/39, Office of this Paper.

QUALIFIED Manager wanted at once, good-class business, country town, West of England; salary £4 per week and good commission to reliable man. Apply, with references, experience, age, etc., saying if interview could be given in Bristol, to 74/20, Office of this Paper.

SENIOR Assistant, qualified, for good-class Retail and Dispensing Business; must be well recommended, capable of control of staff and management, a keen business and Counterman. Application, with all usual particulars, to H. O. Lloyd, 52 Nevill Street, Southport.

UNQUALIFIED Assistant wanted immediately; must be capable Dispenser and Window-dresser, with some knowledge of Photography; age not over 30. Apply, giving experience, references and salary required, to "A. E. T.," c/o T. H. Wilson, 741 Barking Road, Plaistow, E.

VACANCY for smart male Improver with town experience of quick Retail business. Reply by letter in first instance, giving fullest particulars of experience, age, height, salary required, and references. Applications not acknowledged in three days are respectfully declined. The Prosser Roberts Co., 13 Church Street, Camberwell, London.

WANTED, experienced Saleswoman for Chemistry, Toilet, Photographic, Fancy Goods; unqualified; age not under 25. Apply 36/174, Office of this Paper.

WANTED, capable Assistant (unqualified); preference given one with experience Optical work; wage according to experience, minimum 61s. per week. Applications, stating age and detailed experience, to be in not later than January 17, Darlington Co-operative Society, Ltd., Priestgate, Darlington.

YOUNG Assistant required; must be tactful and obliging on Counter and have a sound knowledge of Photography, including Developing and Printing. State experience, references, age, and salary required. Teunon, Chemist, Western Road, Littlehampton, Sussex.

£5 -5s. and commission; Manager, qualified, good Salesman, with first-class general experience; must be an attractive Window-dresser. Apply with usual details to 37/186, Office of this Paper.

WHOLESALE.

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

LANCASHIRE Firm of Manufacturing Chemists require an experienced Traveller to call upon Doctors and Chemists; qualified man preferred. Reply, 73/4, Office of this Paper, giving full particulars as to age, experience, proof of selling ability and salary required.

LONDON House requires Representatives with sound connection amongst Chemists in the following territories: Northern Counties, Midlands, Eastern Counties, Devon and Cornwall. Open accounts handed over to sound Representatives. Applications will be considered for other territories. Write P.C.B. 33/39, Office of this Paper.

I ONDON House requires an energetic and capable Manager for despatch department; must have organising and controlling ability and be conversant with best methods of effecting quick delivery of both London and country orders. Applications, giving particulars of age, experience and salary required, to 74/140, Office of this Paper.

MANCHESTER Druggist Sundries House requires Representative for Midlands, with connection essential; whole or partime. 74/29, Office of this Paper.

S COTLAND.—Representative required, preferably with active connection amongst Chemists in Compressed Tablets and Pills; either part or whole time. Write, in confidence, stating extent of territory, age, and terms, to White Band Manufacturing Co., Ltd., Croydon, Surrey.

A FIRM having a large staff, calling on Chemists and others and in all parts of the country with own cars, desire to take up additional lines on commission. 71/8, Office of this Paper.

A GOOD Wholesale Sundries House Traveller wanted to handle London-made Shaving Brush manufacture; all towns North of London; best goods at keen prices; only men with good connection amongst Wholesale houses need apply; commission basis. State terms to 66/9, Office of this Paper.

PRUGGISTS' SUNDRIES.—Travelier wanted by old-established Manchester firm; one with connection in Lancashire, Yorkshire, and South Wales preferred; whole-time service. Particulars, in absoluto confidence, to 68/25, Office of this Paper.

LIRST-CLASS house of repute requires Representatives, with live connections amongst Chemists in Lancashire, Yorkshire, North-Eastern Counties and South Coast, to sell Drugs, Packed and Tollet Lines, Tablets. Photographics, etc.; liberal commissions to the right men. Write 37/179, Office of this Paper.

PHOTOGRAPHS, TESTIMONIALS, &c.

When answering advertisements in this section applicants are strongly advised not to send (unless specially requested) ORIGINAL TESTI-MONIALS or VALUABLE PHOTOGRAPHS. As can be readily understood, when an advertiser receives from 60 to 100 replies the task of returning photographs, testimonials, &c., is one of some difficulty,

INTELLIGENT, experienced Checker for Druggists' Sundries, Write, stating experience and salary required, to 37/181, Office of this Paper.

JOHN RICHARDSON & CO., LTD., have a vacancy for an experienced Representative in the Middands. Applicants, preferably not over 40 years of age, will please apply by letter to 10 Friar Lane, Leicester, stating qualifications, experience, full particulars as to ground previously covered, age, and salary, exclusive of travelling expenses.

PERLE Capsule Manufacturers.—Wanted, an Assistant with some experience; permanent berth. State salary and particulars to 37/189, Office of this Paper.

REPRESENTATIVE required for London and Suburbs, to call on Chemists on commission basis; small samples; only those carrying other lines, and with personal connection, need apply; age and full particulars. "B. H.," 72/40, Office of this Paper.

RESIDENT Agents, with connection amongst Chemists, Stores and Ironmongers for every provincial city in England, Scotland and Ireland, wanted for the sale of six popular Specialities, on commission, some of them largely advertised. Applications, with full particulars as to ground already worked under, to "J. H. 14," 37/180, Office of this Paper.

WANTED, by old-established London House, Gentleman with practical experience and technical knowledge of manufacturing and packing of Pharmaceutical and Toilet Preparations and Perfumery; must be keen buyer, efficient organiser and able to control staff. Apply, stating age, details of experience, and remuneration expected, to 74/14. Office of this Paper.

WELL-KNOWN firm of Manufacturing Chemists has vacancy for qualified Chemist with manufacturing experience; salary to start £260 per annum, plus share of profits; excelent opportunities for advancement; successful applicant must be prepared to invest £1,000 in the business. Write 37/178, Office of this Paper.

WELL-KNOWN Firm requires Representatives, one each for Midlands and Scotland, for exceptionally quick selling lines; small samples; liberal commission paid to men with good connections. State district covered, lines at present carried, experience, etc.. in confidence, to "R. M. C.," c/o Vernon & Sons, Ltd., 38 Holborn Viaduct, E.C.1.

WET ROOM.—Wholesale Drug House in Yorkshire require an additional Wet Room Assistant experienced in this department. Apply, with full particulars as to age, experience, salary required, and references, to "Liquor," 37/182, Office of this Paper.

YOUTH, about 16, to assist in Despatch Department in London Wholesale Druggists; one with Counter experience preferred. Apply, stating age, experience and wages required, to 37/177, Office of this Paper.

YOUNG lady required in Colonial Merchant's Office; competent Shorthand Writer and Typist; one with some experience in the Drug trade preferred. Apply in own handwriting, stating age and salary expected, to "Drugs" (P.C.B. 33/22), Office of this Paper.

[COLONIAL, INDIAN AND FOREIGN.]

CEYLON.—Dispenser required for Ceylon, holding Minor Certificate, age 24-28 years, single; must be of sober and steady habits, of good address, smart, and pushful; 4 years' agreement at progressive salary. Write in first instance, with full particulars of experience, etc., to "Dispenser," c/o Deacons, Leadenhall Street, E.C.

WANTED, for the Far East, experienced Wholesale Druggists' Warehouseman, accustomed to handling Drugs and Chemicals, Druggists' Sundries, Patent Medicines, and keeping Stock Books; must be of good class; age 25 to 30; unmarried; 4 years' agreement; passage pald out and home. Apply by letter to "Export," 37/185, Office of this Paper.

SITUATIONS WANTED.

RETAIL,

[HOME.]

2s. for 18 words or less; 6d. for every additional 10 words or less, prepaid.

The Anvertiser may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

A.A.A. MANAGER, qualified, London, desires change; office of this Paper. 73/24,

A.A. -QUALIFIED; middle-aged; excellent experience and references; Manager, Senior or Locum. Ellinor, 77 Atlantic Road, Brixton.

A.A. -ADVERTISER, 30, smart, good address, trustworthy, requires post, locum or permanent; 16 years' good experience; Salesman, Photo, Dispense, etc.; free 13th; taken charge; unqualified; excellent references. "W.," 87 Crane Avenue, Isleworth, Middlesex.

A.—PHARMACIST, 28, 12 years' sound experience, last three S. Wales district preferred, not essential. 61/12, Office of this Paper.

A BUSINESS man, Pharmacist and Optician (F.B.O.A.), at present holding responsible managerial position, is thinking of making a change; sound experience, all branches modern business; offers invited. 70/37, Office of this Paper.

A CAPABLE, thoroughly experienced woman Dispenser wants post; Hall qualification. "Dispenser," 108 Lower Richmond Road, Putney, S.W.

ACTIVE, energetic, obliging, experienced, unqualified Assistant, age 28, desirous of a change, seeks permanency in February; not afraid of work; first-class references; experience of many parts of the country. 73/9, Office of this Paper.

A DVERTISER, reluctantly parting with trustworthy lady Assistant (30), is anxious to find her good berth; Counter, Window-dresser, experienced Packer. 70/32, Office of this Paper.

A GE 24; qualified; free; 7 years' experience Dispensing, Photographic, Counter and Veterinary. A. J. Ward, Upper Stratton, Swindon, Wilts.

A GE 28, tall, unqualified, male, studying Optics, desires position anywhere; excellent experience Dispensing (private, N.H.I.), Counter, Photography, Agricultural, Veterinary, in South, Midlands, London and Hospital; excellent references. Particulars, salary, in first letter. Douglas, 30 Roe Street, Macclesfield. Cheshire.

A PPRENTICE.—Tradesman is desirous to place his son, age 173, tall, good appearance, well educated, has passed Preliminary, with a good Dispensing Chemist. Apply W. Adler, Pier Street, Aberystwyth, Wales.

AS Locum; qualified; South Wales, near Cardiff preferred; excellent experience; would entertain view to succession. G. Higgins, Porthcawl.

AS Locum, permanency; moderate terms; good references. "Chemist," c/o Mr. Wick, 11 The Parade, Upper Brockley Road, S.E.

A SSISTANT, 21; disengaged; 5 years' experience, Dispensing and Counter; knowledge Photography. Glyn, Bon Marché, Pontlottyn, Glam.

A SSISTANT or Senior (Hall); 16 years' West-End and provincial experience; apprenticed in first-class Dispensing business; keen and energetic; disengaged; residing in London. 70/28, Office of this Paper.

A SSISTANT seeks engagement; 34, single; 12 years' experience, Retail, Dispensing and Photographic business; London or South Coast preferred. "A.," 44 Oseney Crescent, Kentish Town, N.W.5.

A SSISTANT (lady); proficient in Salesmanship, Dispensing, Photography; London experience; excellent reference; disengaged. Doggrell, 22 Rectory Gardens, Hornsey, N.S.

A SSISTANT, 25, single; thoroughly experienced; Dispensing, Counter, Photo; unemployed. Williams, c/o Day, Bells Hill, Stoke Poges, Bucks.

A SSISTANT, 20 years, tall; 4½ years' Dispensing, Photographic and Window-dressing experience; excellent references; disengaged; S. Wales preferable. W. H. James, Emlyn House, Upper Tumble, Llanelly.

A SSISTANT wanting a place as Improver in Dispensing; 5 years' experience; Part I Minor; terms, board and lodgings, or equivalent if outdoors. O. Jones, Llanfair, T.H., Abergele, North Wales.

A SSISTANT, unqualified, 10 years' experience, desires situation, permanent. Write, "S.," 5 Learnington Road, Southend-on-Sea.

A SSISTANT; qualified; speaking French; first-class experience; London or snburbs. "T.," 4 Kenilworth Court, Putney, S.W.

A SSISTANT, unqualified, with varied experience, desires suitable berth; middle-aged; outdoors. Jones, 69 Annesley Avenue, Hendon, N.W.9.

A SSISTANT (24); unqualified; 7 years' experience all branches. Hopkins, 3 Lyndhurst Place, Walcot, Bath.

A SSISTANT Manager; thorough varied experience; good-class working; N.H.I., Agricultural, Photo; married. "Chemicus," Lloyd Street, Greenheys, Manchester.

A SSISTANT, unqualified, desires change of position; permanency; Essex preferred; 14 years' all-round experience; excellent references. Reply, 74/18, Office of this Paper.

BRIGHTON - Middle-aged gentleman requires post this district; good-class experience; Retail, Wholesale. "Advertiser," 40 Walpole Road, Kemp Town.

BRISTOL OR DISTRICT.—As Branch Manager or qualified Assistant; 24; permanency required; excellent references; city and country experience. 74/32, Office of this Paper.

CAPABLE all-round Assistant (unqualified), good-class experience, good refs., desires post shortly. 73/37, Office of this Paper.

CHEMIST'S daughter. M.P.S. (28), desires post; good Dispensing, Counter experience, and knowledge of Photography. Edmunds, Pharmacist, Mere, Wilts.

CHEMIST'S son, qualified, young, good general experience, including management, desires post; London preferred, not essential; moderate salary. "Xytol," 29 Westcombe Hill, Blackheath, S.E.3.

COUNTER HAND, DISPENSER; young lady (aged 23); excellent West-End experience; knowledge of Photography; good Saleswoman; free now. "Don," 32 Burton Street, W.C.

DISENGAGED 12th inst.—Locum or permanent; qualified; experienced; good Dispenser; excellent references. "Pharmacist," 3 Rectory Road, Stoke Newington, N.

DISENGAGED; Assistant; good Dispensing and Counter experience, Photography and Window-dressing, Shiels, 28 Newington Butts, S.E.

DISPENSER and Book-keeper (Minor) desires post in or near London. Miss Wells, M.P.S., 3 Trebovir Road, S.W.5.

DISPENSER; disengaged; Light Retail experience; Photographics; good references. Roberts, 5 Clifton Terrace, Barnstaple, N. Devon.

DISPENSER, lady, Hall, experienced, or Dispenser-Secretary; Typewriting; daily, whole or good part time. 48 Buckleigh Road, Streatham.

DISPLAY man desires whole- or part-time engagements; Photographic, Toilet Displays, etc.; London preferred.

DRUG Store Business - Pharmaceutical Chemist, 28, country and London retail experience, some knowledge advertising, at present engaged in London, wishes job in store. Write, in confidence, 73/29, Office of this Paper.

IMPROVER, aged 18, would accept small remuneration to gain further experience; tall and of good address; good Window-dresser, Ticket and Showcard Writer. Wosencroft, 9 Petersfield, Cambridge.

RELAND.—Advertiser, Ph.C., would like to hear of post with view to Partnership or succession; experienced Manager; 30; City preferred. Reply to 72/27, Office of this Paper.

JUNIOR Assistant (25), Chemist's son, desires post in North London; 4 years' experience of Window-dressing, Salesmanship, etc. A. Jenkin, 352 High Road, N.22. 'Phono: 475 Palmers Green. ADY Dispenser (Hall) desires post with Chemist or Institution; experienced. Dicks, 13 Manse Road, Stoke Newington, N.16.

ADY Dispenser (Hall) requires post anywhere; book-keeping; good experience with Doctors; testimonials; moderate salary.

55 Mayfair Avenue, Ilford, Essex.

LADY, qualified, 22, requires post with Chemist; Liverpool district preferred. 73/21, Office of this Paper.

ADY Dispenser (Hall Certificate), good references and experience, wants post, London or Circnester neighbourhood. 73/35, Office of this Paper.

ADY, 26, wishes to learn the trade in Bristol; no experience; any offers; state salary offered. 74/320, Office of this Paper.

ANCASHIRE position required as Manager in Drug Store or Chemist's business, with view to purchase. Apply, "M.P.S.," c/o Law, Royal Chambers, Richmond Terrace, Blackburn.

LOCUM or permanency; qualified (33); good experience and references; disengaged. C. O. Lawrence, Market Place, Loftus, Yorks.

LOCUM or Manager; temporary or permanent. Underwood, M.P.S., 47 Leominster Road, Wallasey,

OCUM or permanency; Minor; good Retail and Dispensing experience; elderly; good references. P. Smith, 127 Capel Road, Forest Gate, E.7.

LOCUM; 20 years' all-round town and country experience; thoroughly competent, reliable, industrious; well recommended; disengaged 14th inst; terms reasonable. "Rhei," 239 Camberwell New Road, S.E.5.

ONDON; qualified, as Manager, Locum or part-time, or position in Wholesale; abstainer; reliable. Thomas, 145 Kennington Park Road, S.E.11.

MANAGER; 34; married; 13 years' qualification; free early February; first-class experience; seaside and Store trade; living accommodation preferred if possible; permanent. "Chemist," 19 Tate Road, Cheam, Surrey.

MANAGER or Senior, 34, present managing, desires permanency; Scotland preferred; excellent references. "Chemist," 4 Stirling Road, Townhead, Glasgow.

MANAGER (40); qualified; wide experience; excellent references; disengaged. Dodd, Felley Priory, Jacksdale, Notts.

MANAGER; energetic, reliable, years all-round experience, Salesman; work up branch or entertain succession; unregistered; disengaged. Address, "Locum," 14 Hubert Grove, Stockwell, S.W.9.

MANAGER or Assistant; qualified; single; 29; height 5 ft. 8½ in.; smart appearance; good all-round experience; trustworthy, capable; London or S.W. England. "Scotsman," 25 High Street, Glastonbury.

MANAGER or Locum; experienced; used to control staff; first-class Salesman; excellent references. 73/34, Office of this Paper.

MANAGER or Cover; experienced; with or without view to succession. "E.," 73/340, Office of this Paper.

MANAGER or Senior; London; best experience in all branches of Modern Pharmacy. P.C.B. 34/15, Office of this Paper.

MANAGEMENT branch, small shop, Dispensing; Locum; 50; qualified; single; capable; experienced; aptitude. "Chemist," 73 The Green, Mountsorrel, Leicester.

MANCHESTER or Stockport.—Junior requires post in good business; wants experience in Dispensing and Counter. A. Greenhalgh, Hope Bank, Gorton Road, Reddish.

NOT only qualified, but a business man; Salesman of outstanding ability; Manager; 28; 6 ft.; 10 years' experience in all branches; Manchester or suburbs. "Misere," 71/1, Office of this Paper.

NURSE-DISPENSER, Book-keeper, qualified M.P.S., 3 years' war service, highest references, desires post in any suitable capacity. P.C.B. 33/21, Office of this Paper.

PART-TIME, evenings; good all-round man; excellent references; S.E. or S.W. Martin, 16 Dundalk Road, S.E.4.

PART-TIME.—All-round man, 23; good Salesman, quick and accurate Dispenser; Brighton district preferred. "Chemist," 88 St. George's Road, Brighton.

PHARMACIST-MANAGER or Assistant Manager; smart appearance; Store, high-class Retail Dispensing; experienced; tactful Salesman; permanent position; disengaged; reliable reference. Nicholls, 1 Alleyne Grove, Wheelwright Estate, Erdington, Birmingham.

QUALIFIED (28), tall; 7 years' good all-round experience; disengaged. Bate, 14 Sebright Avenue, London Road, Worcester.

QUALIFIED, 25, as Assistant or Manager; good appearance; excellent references; disengaged. Grimwade, 171 Ravenscroft Road, Beckenham.

QUALIFIED lady (Minor) desires post; excellent good-class
Dispensing and Retail experience; London. "Chemist,"
Kreet, Baker Street, W.C.

QUALIFIED; elderly; Hospital or Institution; 11 years' Hospital experience. "Chelsea," 22 Bramerton Street, Chelsea, S.W.3.

QUALIFIED, young, energetic, seeks engagement as Manager, Managing Partner or Assistant; keen; good all round; excellent references; disengaged next week. "Acer," 66/14, Office of this Paper.

QUALIFIED, Photographic, Optical (passed S.M.C. Examination), requires post London or suburbs; would require time to attend bi-weekly lectures; age 24; experienced. Apply 70/34, Office of this Paper.

QUALIFIED Locum or permanent; age 40; accustomed to Drug Store trade and Hospitals; well recommended; moderate terms. "Pharmacist," 1 Abbeville Road, S.W.4.

QUALIFIED, 22, male, desires situation; will go anywhere; excellent references and good Dispensing experience. Apply, "Chemist," 19 East Ham Road, Littlehampton.

QUALIFIED, 7 years' London and Provincial experience, decires post as Assistant or Manager; energetic and obliging; highest references; disengaged. L. Windley, 133 Cotmanhay Road, Ilkeston, Derbyshire.

QUALIFIED Chemist and L.D.S., well up in both, desires post in town or country; single; abstainer; surgical instruments supplied; good references. Apply 72/28, Office of this Paper.

QUALIFIED, experienced, good references, desires engagement as Manager or Locum; permanency preferred. "Chemist," 54 Crouch Hill, N.4.

QUALIFIED Chemist, shortly disengaged, experienced, desires post as Manager, or Protection entertained. "Chemicus," 164 Wrexham Road, Whitchurch, Salop.

QUALIFIED, 26, as Assistant or Manager; London experience; excellent references; disengaged. Bloom, Beechwood Crescent, Harrogate.

QUALIFIED (22), good references, desires post, preferably in or near London; previous London experience. "J. T.," 14 Sussex Road, Haywards Heath.

SMART, unqualified, 30, keen, quick, energetic; excellent references. Lydford, 44 Kingswood Road, Brixton Hill, S.W.2.

SON of Pharmacist desires situation as Improver; nearly two years' experience good-class business; registered student; age 19; appearance and address good. 74/26, Office of this Paper.

YOUNG unqualified Assistant desires change; South Wales preferred; good experience; excellent references. Apply "Rhei," 4 St. James' Square, Bristol.

YOUNG Lady, qualified, requires post; 5 years' experience in Counter, Dispensing and Photographic work; good references. Humfress, 3 St. Matthew's Place, Ipswich.

YOUNG lady requires post as Dispenser, etc., to Chemist; unqualified; small salary accepted. P.C.B. 31/34, Office of this Paper.

UNQUALIFIED Assistant, 20, well educated, height 6 ft., disengaged 30th, requires position as Junior; full knowledge of Dispensing, Counter, Window, Photo. "E. N.," c/o 22 Victoria Street, Warwick.

UNQUALIFIED; Assistant to Chemist or Dispenser to a Doctor; 26 years' experience London and country. 73/12, Office of this Paper.

10, JUNIOR, disengaged end of month; 4 years' experience, including Photography, Window-dressing, and N.H.I. Dispensing; tall, dark; Midlands preferred; passed Junior; indoor preferred, but not essential. Barnsby, c/o C. Bayley, Chemist, Uppingham.

WHOLESALE.

2s. for 18 words or less; 6d. for every additional 10 words or less, prepaid.

A DVERTISER, having exceptionally sound knowledge of Toilet, Brush and Sundries trade, requires position as Buyer or Manager. Reply P.C.B. 32/14, Office of this Paper.

A DVERTISER, 30, experienced Window-dressing and Travelling, desires post; excellent references; disengaged. "G.,"
17 Old Kent Road, London, S.E.1.

A DVERTISER, young, smart, good education, good Salesman, retail, manufactory experience, controller filling and packing and clerical, drugs, tollet, beverages, seeks job where enterprise and energy is required. "System," 27 Crane Avenue, Isleworth.

A NALYTICAL or Research Chemist; Works or Private Practice; 27; B.Sc. Lond.; first-class honours Chemistry; some knowledge French; 3 years' Articled Pupil, Laboratory Analytical and Consulting Chemist; experience in manufacture of Pharmaceutical Preparations; has also some experience as Public Analysts, Foods, Drugs, Water Supply, Sewage, Medical Analysis, etc. M.L. 49250, Office of this Paper.

A NALYTICAL Chemist, 35; 4 years' war service; educated Public School; B.A., Inter B.Sc. Engr. and Chemistry; some experience as Chemist and Assistant Manager, Paper Mills; willing to take any post. M.L. 1606/23. Office of this Paper.

CHEMIST (Research or Works); 23; B.Sc.(Lond.), A.I.C.; some experience as Pupil Assistant, Public Analyst and as Analyst with fine Chemical Manufacturers. M.L. 25833, Office of this Paper.

DRUG, Sundries Buyer, sales organisation and administrative routine; young, energetic; excellent references; moderate salary. "G.," 78 Crescent Road, Alexandra Park, N.22. salary.

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